STUDY MATERIALS
PART V

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Bangkok, Thailand
21 – 22 November 2012

LAW OF THE SEA
PROFESSOR TULLIO TREVES

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MULTILATERAL


MULTILATÉRAL


UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

The States Parties to this Convention,

Prompted by the desire to settle, in a spirit of mutual understanding and co-operation, all issues relating to the law of the sea and aware of the historic significance of this Convention as an important contribution to the maintenance of peace, justice and progress for all peoples of the world,

Noting that developments since the United Nations Conferences on the Law of the Sea held at Geneva in 1958 and 1960 have accentuated the need for a new and generally accepted Convention on the law of the sea,

Conscious that the problems of ocean space are closely interrelated and need to be considered as a whole,

Recognising the desirability of establishing through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment,

have agreed as follows:

1. Came into force on 16 November 1994, i.e., 12 months after the date of deposit with the Secretary-General of the United Nations of the sixth instrument of ratification or accession, in accordance with article 308 (1):

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* For the declarations made upon ratification or accession, see vol. 1835, p. 105.

The following States also deposited instruments of ratification, accession or notification of succession:

- Bosna and Herzegovina
- Comoros
- Sri Lanka
- Seven Nam
- Viet Nam

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PART I
INTRODUCTION

Article 1
Use of terms and scope

1. For the purposes of this Convention:

(1) "Area" means the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction;

(2) "Authority" means the International Sea-Bed Authority;

(3) "activities in the Area" means all activities of exploration for, and exploitation of, the resources of the Area;

(4) "pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities;

(5) (a) "dumping" means:

(i) any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;

(ii) any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea;

(b) "dumping" does not include:

(i) the disposal of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or structures;

(ii) placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention.

2. (1) "States Parties" means States which have consented to be bound by this Convention and for which this Convention is in force.

(2) This Convention applies mutatis mutandis to the entities referred to in article 305, paragraph 1(b), (c), (d), (e) and (f), which become Parties to this Convention in accordance with the conditions relevant to each, and to that extent "States Parties" refers to those entities.

PART II
TERRITORIAL SEA AND CONTIGUOUS ZONE

SECTION 1. GENERAL PROVISIONS

Article 2
Legal status of the territorial sea, of the air space over the territorial sea and of its bed and subsoil

1. The sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea.

2. This sovereignty extends to the air space over the territorial sea as well as to its bed and subsoil.

3. The sovereignty over the territorial sea is exercised subject to this Convention and to other rules of international law.

SECTION 2. LIMITS OF THE TERRITORIAL SEA

Article 3
Breadth of the territorial sea

Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention.

Article 4
Outer limit of the territorial sea

The outer limit of the territorial sea is the line every point of which is at a distance from the nearest point of the baseline equal to the breadth of the territorial sea.

Article 5
Normal baseline

Except where otherwise provided in this Convention, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognised by the coastal State.
Article 6
Reefs

In the case of islands situated on atolls or of islands having fringing reefs, the baseline for measuring the breadth of the territorial sea is the seaward low-water line of the reef, as shown by the appropriate symbol on charts officially recognized by the coastal State.

Article 7
Straight baselines

1. In localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.

2. Where because of the presence of a delta and other natural conditions the coastline is highly unstable, the appropriate points may be selected along the furthest seaward extent of the low-water line and, notwithstanding subsequent regression of the low-water line, the straight baselines shall remain effective until changed by the coastal State in accordance with this Convention.

3. The drawing of straight baselines must not depart to any appreciable extent from the general direction of the coast, and the sea areas lying within the lines must be sufficiently closely linked to the land domain to be subject to the régime of internal waters.

4. Straight baselines shall not be drawn too close from low-tide elevations, except where lighthouses or similar installations which are permanently above sea level have been built on them or except in instances where the drawing of baselines to and from such elevations has received general international recognition.

5. In determining particular baselines, of economic interests peculiar to the region concerned, the reality and the importance of which are clearly evidenced by long usage, where the method of straight baselines is applicable under paragraph 1, account may be taken, in determining particular baselines.

6. The system of straight baselines may not be applied by a State in such a manner as to cut off the territorial sea of another State from the high seas or an exclusive economic zone.

Article 8
Internal waters

1. Except as provided in Part IV, waters on the landward side of the baseline of the territorial sea form part of the internal waters of the State.

2. Where the establishment of a straight baseline in accordance with the method set forth in article 7 has the effect of enclosing as internal waters areas which had not previously been considered as such, a right of innocent passage as provided in this Convention shall exist in those waters.

Article 9
Mouths of rivers

If a river flows directly into the sea, the baseline shall be a straight line across the mouth of the river between points on the low-water line of its banks.

Article 10
Bays

1. This article relates only to bays the coasts of which belong to a single State.

2. For the purposes of this Convention, a bay is a well-marked indentation whose penetration is in such proportion to the width of its mouth as to contain land-locked waters and constitute more than a mere curvature of the coast. An indentation shall not, however, be regarded as a bay unless its area is as large as, or larger than, that of the semi-circle whose diameter is a line drawn across the mouth of that indentation.

3. For the purpose of measurement, the area of an indentation is that lying between the low-water mark around the shore of the indentation and a line joining the low-water mark of its natural entrance points. Where, because of the presence of islands, an indentation has more than one mouth, the semi-circle shall be drawn on a line as long as the sum total of the lengths of the lines across the different mouths. Islands within an indentation shall be included as if they were part of the water area of the indentation.

4. If the distance between the low-water marks of the natural entrance points of a bay does not exceed 24 nautical miles, a closing line may be drawn between these two low-water marks, and the waters enclosed thereby shall be considered as internal waters.

5. Where the distance between the low-water marks of the natural entrance points of a bay exceeds 24 nautical miles, a straight baseline of 24 nautical miles shall be drawn within the bay in such a manner as to enclose the maximum area of water that is possible with a line of that length.

6. The foregoing provisions do not apply to so-called "historic" bays, or in any case where the system of straight baselines provided for in article 7 is applied.

Article 11
Ports

For the purpose of delimiting the territorial sea, the outermost permanent harbour works which form an integral part of the harbour system are regarded as forming part of the coast. Off-shore installations and artificial islands shall not be considered as permanent harbour works.
Article 12

Roadsteads

Roadsteads which are normally used for the loading, unloading and anchoring of ships, and which would otherwise be situated wholly or partly outside the outer limit of the territorial sea, are included in the territorial sea.

Article 13

Low-tide elevations

1. A low-tide elevation is a naturally formed area of land which is surrounded by and above water at low tide but submerged at high tide. Where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the mainland or an island, the low-water line on that elevation may be used as the baseline for measuring the breadth of the territorial sea.

2. Where a low-tide elevation is wholly situated at a distance exceeding the breadth of the territorial sea from the mainland or an island, it has no territorial sea of its own.

Article 14

Combination of methods for determining baselines

The coastal State may determine baselines in turn by any of the methods provided for in the foregoing articles to suit different conditions.

Article 15

Delimitation of the territorial sea between States with opposite or adjacent coasts

Where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial sea of each of the two States is measured. The above provision does not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance therewith.

Article 16

Charts and lists of geographical co-ordinates

1. The baselines for measuring the breadth of the territorial sea determined in accordance with articles 7, 9 and 10, or the limits derived therefrom, and the lines of delimitation drawn in accordance with articles 12 and 15 shall be shown on charts of a scale or scales adequate for ascertaining their position. Alternatively, a list of geographical co-ordinates of points, specifying the geodetic datum, may be substituted.

2. The coastal State shall give due publicity to such charts or lists of geographical co-ordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations.

SECTION 3. INNOCENT PASSAGE IN THE TERRITORIAL SEA

SUBSECTION A. RULES APPLICABLE TO ALL SHIPS

Article 17

Right of innocent passage

Subject to this Convention, ships of all States, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.

Article 18

Meaning of passage

1. Passage means navigation through the territorial sea for the purpose of:

(a) traversing that sea without entering internal waters or calling at a roadstead or port facility outside internal waters; or

(b) proceeding to or from internal waters or a call at such roadstead or port facility.

2. Passage shall be continuous and expeditious. However, passage includes stopping and anchoring, but only in so far as the same are incidental to ordinary navigation or are rendered necessary by force majeure or distress or for the purpose of rendering assistance to persons, ships or aircraft in danger or distress.

Article 19

Meaning of innocent passage

1. Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State if in the territorial sea it engages in any of the following activities:

(a) any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;

(b) any exercise or practice with weapons of any kind;

(c) any act aimed at collecting information to the prejudice of the defence or security of the coastal State;

(d) any act of propaganda aimed at affecting the defence or security of the coastal State;

(e) the launching, landing or taking on board of any aircraft;
(f) the launching, landing or taking on board of any military device;

(g) the loading or unloading of any commodity, currency or person contrary to the customs, fiscal, immigration or sanitary laws and regulations of the coastal State;

(h) any act of wilful and serious pollution contrary to this Convention;

(i) any fishing activities;

(j) the carrying out of research or survey activities;

(k) any act aimed at interfering with any systems of communication or any other facilities or installations of the coastal State;

(l) any other activity not having a direct bearing on passage.

Article 20
Submarines and other underwater vehicles

In the territorial sea, submarines and other underwater vehicles are required to navigate on the surface and to show their flag.

Article 21
Laws and regulations of the coastal State relating to innocent passage

1. The coastal State may adopt laws and regulations, in conformity with the provisions of this Convention and other rules of international law, relating to innocent passage through the territorial sea, in respect of all or any of the following:

(a) the safety of navigation and the regulation of maritime traffic;

(b) the protection of navigational aids and facilities and other facilities or installations;

(c) the protection of cables and pipelines;

(d) the conservation of the living resources of the sea;

(e) the prevention of infringement of the fisheries laws and regulations of the coastal State;

(f) the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof;

(g) marine scientific research and hydrographic surveys;

(h) the prevention of infringement of the customs, fiscal, immigration or sanitary laws and regulations of the coastal State.

2. Such laws and regulations shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards.

3. The coastal State shall give due publicity to all such laws and regulations.

4. Foreign ships exercising the right of innocent passage through the territorial sea shall comply with all such laws and regulations and all generally accepted international regulations relating to the prevention of collisions at sea.

Article 22
Sea lanes and traffic separation schemes in the territorial sea

1. The coastal State may, where necessary having regard to the safety of navigation, require foreign ships exercising the right of innocent passage through its territorial sea to use such sea lanes and traffic separation schemes as it may designate or prescribe for the regulation of the passage of ships.

2. In particular, tankers, nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances or materials may be required to confine their passage to such sea lanes.

3. In the designation of sea lanes and the prescription of traffic separation schemes under this article, the coastal State shall take into account:

(a) the recommendations of the competent international organization;

(b) any channels customarily used for international navigation;

(c) the special characteristics of particular ships and channels; and

(d) the density of traffic.

4. The coastal State shall clearly indicate such sea lanes and traffic separation schemes on charts to which due publicity shall be given.

Article 23
Foreign nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances

Foreign nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances shall, when exercising the right of innocent passage through the territorial sea, carry documents and observe special precautionary measures established for such ships by international agreements.

Article 24
Duties of the coastal State

1. The coastal State shall not hamper the innocent passage of foreign ships through the territorial sea except in accordance with this Convention. In particular, in the application of this Convention or of any laws or regulations adopted in conformity with this Convention, the coastal State shall not:

(a) impose requirements on foreign ships which have the practical effect of denying or impairing the right of innocent passage; or

(b) discriminate in form or in fact against the ships of any State or against ships carrying cargoes to, from or on behalf of any State.
2. The coastal State shall give appropriate publicity to any danger to navigation, of which it has knowledge, within its territorial sea.

Article 25
Rights of protection of the coastal State

1. The coastal State may take the necessary steps in its territorial sea to prevent passage which is not innocent.

2. In the case of ships proceeding to internal waters or a call at a port facility outside internal waters, the coastal State also has the right to take the necessary steps to prevent any breach of the conditions to which admission of those ships to internal waters or such a call is subject.

3. The coastal State may, without discrimination in form or in fact among foreign ships, suspend temporarily in specified areas of its territorial sea the innocent passage of foreign ships if such suspension is essential for the protection of its security, including weapons exercises. Such suspension shall take effect only after having been duly published.

Article 26
Charges which may be levied upon foreign ships

1. No charge may be levied upon foreign ships by reason only of their passage through the territorial sea.

2. Charges may be levied upon a foreign ship passing through the territorial sea as payment only for specific services rendered to the ship. These charges shall be levied without discrimination.

SUBSECTION B. RULES APPLICABLE TO MERCHANT SHIPS AND GOVERNMENT SHIPS OPERATED FOR COMMERCIAL PURPOSES

Article 27
Criminal jurisdiction on board a foreign ship

1. The criminal jurisdiction of the coastal State should not be exercised on board a foreign ship passing through the territorial sea to arrest any person or to conduct any investigation in connection with any crime committed on board the ship during its passage, save only in the following cases:

(a) if the consequences of the crime extend to the coastal State;

(b) if the crime is of a kind to disturb the peace of the country or the good order of the territorial sea;

(c) if the assistance of the local authorities has been requested by the master of the ship or by a diplomatic agent or consular officer of the flag State; or

(d) if such measures are necessary for the suppression of illicit traffic in narcotic drugs or psychotropic substances.

3. In the cases provided for in paragraphs 1 and 2, the coastal State shall, if the master so requests, notify a diplomatic agent or consular officer of the flag State before taking any steps, and shall facilitate contact between such agent or officer and the ship's crew. In cases of emergency this notification may be communicated while the measures are being taken.

4. In considering whether or in what manner an arrest should be made, the local authorities shall have due regard to the interests of navigation.

5. Except as provided in Part XII or with respect to violations of laws and regulations adopted in accordance with Part V, the coastal State may not take any steps on board a foreign ship passing through the territorial sea to arrest any person or to conduct any investigation in connection with any crime committed before the ship entered the territorial sea, if the ship, proceeding from a foreign port, is only passing through the territorial sea without entering internal waters.

Article 28
Civil jurisdiction in relation to foreign ships

1. The coastal State should not stop or divert a foreign ship passing through the territorial sea for the purpose of exercising civil jurisdiction in relation to a person on board the ship.

2. The coastal State may not levy execution against or arrest the ship for the purpose of any civil proceedings, save only in respect of obligations or liabilities assumed or incurred by the ship itself in the course or for the purpose of its voyage through the waters of the coastal State.

3. Paragraph 2 is without prejudice to the right of the coastal State, in accordance with its laws, to levy execution against or to arrest, for the purpose of any civil proceedings, a foreign ship lying in the territorial sea, or passing through the territorial sea after leaving internal waters.

SUBSECTION C. RULES APPLICABLE TO WARSHIPS AND OTHER GOVERNMENT SHIPS OPERATED FOR NON-COMMERCIAL PURPOSES

Article 29
Definition of warships

For the purposes of this Convention, "warship" means a ship belonging to the armed forces of a State bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent, and manned by a crew which is under regular armed forces discipline.
Article 30
Non-compliance by warships with the laws and regulations of the coastal State

If any warship does not comply with the laws and regulations of the coastal State concerning passage through the territorial sea and disregards any request for compliance therewith which is made to it, the coastal State may require it to leave the territorial sea immediately.

Article 31
Responsibility of the flag State for damage caused by a warship or other government ship operated for non-commercial purposes

The flag State shall bear international responsibility for any loss or damage to the coastal State resulting from the non-compliance by a warship or other government ship operated for non-commercial purposes with the laws and regulations of the coastal State concerning passage through the territorial sea or with the provisions of this Convention or other rules of international law.

Article 32
Immunities of warships and other government ships operated for non-commercial purposes

With such exceptions as are contained in subsection A and in articles 30 and 31, nothing in this Convention affects the immunities of warships and other government ships operated for non-commercial purposes.

SECTION 4. CONTIGUOUS ZONE

Article 33
Contiguous zone

1. In a zone contiguous to its territorial sea, described as the contiguous zone, the coastal State may exercise the control necessary to:

(a) prevent infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea;

(b) punish infringement of the above laws and regulations committed within its territory or territorial sea.

2. The contiguous zone may not extend beyond 24 nautical miles from the baselines from which the breadth of the territorial sea is measured.

PART III
STRAITS USED FOR INTERNATIONAL NAVIGATION

SECTION 1. GENERAL PROVISIONS

Article 34
Legal status of waters forming straits used for international navigation

1. The régime of passage through straits used for international navigation established in this Part shall not in other respects affect the legal status of the waters forming such straits or the exercise by the States bordering the straits of their sovereignty or jurisdiction over such waters and their air space, bed and subsoil.

2. The sovereignty or jurisdiction of the States bordering the straits is exercised subject to this Part and to other rules of international law.

Article 35
Scope of this Part

Nothing in this Part affects:

(a) any areas of internal waters within a strait, except where the establishment of a straight baseline in accordance with the method set forth in article 7 has the effect of enclosing as internal waters areas which had not previously been considered as such;

(b) the legal status of the waters beyond the territorial seas of States bordering straits as exclusive economic zones or high seas;

(c) the legal régime in straits in which passage is regulated in whole or in part by long-standing international conventions in force specifically relating to such straits.

Article 36
High seas routes or routes through exclusive economic zones through straits used for international navigation

This Part does not apply to a strait used for international navigation if there exists through the strait a route through the high seas or through an exclusive economic zone of similar convenience with respect to navigational and hydrographical characteristics; in such routes, the other relevant Parts of this Convention, including the provisions regarding the freedoms of navigation and overflight, apply.
SECTION 2. TRANSIT PASSAGE

Article 37
Scope of this section

This section applies to straits which are used for international navigation between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone.

Article 38
Right of transit passage

1. In straits referred to in article 37, all ships and aircraft enjoy the right of transit passage, which shall not be impeded; except that, if the strait is formed by an inland of a State bordering the strait and its mainland, transit passage shall not apply if there exists seaward of the island a route through the high seas or through an exclusive economic zone of similar convenience with respect to navigational and hydrographical characteristics.

2. Transit passage means the exercise in accordance with this Part of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone. However, the requirement of continuous and expeditious transit does not preclude passage through the strait for the purpose of entering, leaving or returning from a State bordering the strait, subject to the conditions of entry to that State.

3. Any activity which is not an exercise of the right of transit passage through a strait remains subject to the other applicable provisions of this Convention.

Article 39
Duties of ships and aircraft during transit passage

1. Ships and aircraft, while exercising the right of transit passage, shall:

(a) proceed without delay through or over the strait;

(b) refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;

(c) refrain from any activities other than those incident to their normal modes of continuous and expeditious transit unless rendered necessary by force majeure or by distress;

(d) comply with other relevant provisions of this Part.

2. Ships in transit passage shall:

(a) comply with generally accepted international regulations, procedures and practices for safety at sea, including the International Regulations for Preventing Collisions at Sea;

(b) comply with generally accepted international regulations, procedures and practices for the prevention, reduction and control of pollution from ships.

3. Aircraft in transit passage shall:

(a) observe the Rules of the Air established by the International Civil Aviation Organization as they apply to civil aircraft; state aircraft will normally comply with such safety measures and will at all times operate with due regard for the safety of navigation;

(b) at all times monitor the radio frequency assigned by the competent internationally designated air traffic control authority or the appropriate international distress radio frequency.

Article 40
Research and survey activities

During transit passage, foreign ships, including marine scientific research and hydrographic survey ships, may not carry out any research or survey activities without the prior authorization of the states bordering straits.

Article 41
Sea lanes and traffic separation schemes in straits used for international navigation

1. In conformity with this Part, States bordering straits may designate sea lanes and prescribe traffic separation schemes for navigation in straits where necessary to promote the safe passage of ships.

2. Such States may, when circumstances require, and after giving due publicity thereto, substitute other sea lanes or traffic separation schemes for any sea lanes or traffic separation schemes previously designated or prescribed by them.

3. Such sea lanes and traffic separation schemes shall conform to generally accepted international regulations.

4. Before designating or substituting sea lanes or prescribing or substituting traffic separation schemes, States bordering straits shall refer proposals to the competent international organization with a view to their adoption. The organization may adopt only such sea lanes and traffic separation schemes as may be agreed with the States bordering the straits, after which the States may designate, prescribe or substitute them.

5. In respect of a strait where sea lanes or traffic separation schemes through the waters of two or more States bordering the strait are being proposed, the States concerned shall co-operate in formulating proposals in consultation with the competent international organization.

6. States bordering straits shall clearly indicate all sea lanes and traffic separation schemes designated or prescribed by them on charts to which due publicity shall be given.

7. Ships in transit passage shall respect applicable sea lanes and traffic separation schemes established in accordance with this article.
Article 42

Laws and regulations of States bordering straits relating to transit passage

1. Subject to the provisions of this section, States bordering straits may adopt laws and regulations relating to transit passage through straits, in respect of all or any of the following:

(a) the safety of navigation and the regulation of maritime traffic, as provided in article 41;

(b) the prevention, reduction and control of pollution, by giving effect to applicable international regulations regarding the discharge of oil, oily wastes and other noxious substances in the strait;

(c) with respect to fishing vessels, the prevention of fishing, including the stowage of fishing gear;

(d) the loading or unloading of any commodity, currency or person in contravention of the customs, fiscal, immigration or sanitary laws and regulations of States bordering straits.

2. Such laws and regulations shall not discriminate in form or in fact among foreign ships or in their application have the practical effect of denying, hampering or impairing the right of transit passage as defined in this section.

3. States bordering straits shall give due publicity to all such laws and regulations.

4. Foreign ships exercising the right of transit passage shall comply with such laws and regulations.

5. The flag State of a ship or the State of registry of an aircraft entitled to sovereign immunity which acts in a manner contrary to such laws and regulations or other provisions of this Part shall bear international responsibility for any loss or damage which results to States bordering straits.

Article 43

Navigational and safety aids and other improvements and the prevention, reduction and control of pollution

User States and States bordering a strait should by agreement co-operate:

(a) in the establishment and maintenance in a strait of necessary navigational and safety aids or other improvements in aid of international navigation; and

(b) for the prevention, reduction and control of pollution from ships.

Article 44

Duties of States bordering straits

States bordering straits shall not hamper transit passage and shall give appropriate publicity to any danger to navigation or overflight within or over the strait of which they have knowledge. There shall be no suspension of transit passage.
3. The drawing of such baselines shall not depart to any appreciable extent from the general configuration of the archipelago.

4. Such baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the nearest island.

5. The system of such baselines shall not be applied by an archipelagic State in such a manner as to cut off from the high seas or the exclusive economic zone the territorial sea of another State.

6. If any part of the archipelagic waters of an archipelagic State lies between two parts of an immediately adjacent neighbouring State, existing rights and all other legitimate interests which the latter State has traditionally exercised in such waters and all rights stipulated by agreement between those States shall continue and be respected.

7. For the purpose of computing the ratio of water to land under paragraph 1, land areas may include waters lying within the fringing reefs of islands and atolls, including that part of a steep-sided oceanic plateau which is enclosed or nearly enclosed by a chain of limestone islands and drying reefs lying on the perimeter of the plateau.

8. The baselines drawn in accordance with this article shall be shown on charts of a scale or scales adequate for ascertaining their position. Alternatively, lists of geographical co-ordinates of points, specifying the geodetic datum, may be substituted.

9. The archipelagic State shall give due publicity to such charts or lists of geographical co-ordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations.

Article 48

Measurement of the breadth of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf

The breadth of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf shall be measured from archipelagic baselines drawn in accordance with article 47.

Article 49

Legal status of archipelagic waters, of the air space over archipelagic waters and of their bed and subsoil

1. The sovereignty of an archipelagic State extends to the waters enclosed by the archipelagic baselines drawn in accordance with article 47, described as archipelagic waters, regardless of their depth or distance from the coast.

2. This sovereignty extends to the air space over the archipelagic waters, as well as to their bed and subsoil, and the resources contained therein.

3. This sovereignty is exercised subject to this Part.

4. The régime of archipelagic sea lanes passage established in this Part shall not in other respects affect the status of the archipelagic waters, including the sea lanes, or the exercise by the archipelagic State of its sovereignty over such waters and their air space, bed and subsoil, and the resources contained therein.

Article 50

Delimitation of internal waters

Within its archipelagic waters, the archipelagic State may draw closing lines for the delimitation of internal waters, in accordance with articles 9, 10 and 11.

Article 51

Existing agreements, traditional fishing rights and existing submarine cables

1. Without prejudice to article 49, an archipelagic State shall respect existing agreements with other States and shall recognize traditional fishing rights and other legitimate activities of the immediately adjacent neighbouring States in certain areas falling within archipelagic waters. The terms and conditions for the exercise of such rights and activities, including the nature, the extent and the areas to which they apply, shall, at the request of any of the States concerned, be regulated by bilateral agreements between them. Such rights shall not be transferred to or shared with third States or their nationals.

2. An archipelagic State shall respect existing submarine cables laid by other States and passing through its waters without making a landfall. An archipelagic State shall permit the maintenance and replacement of such cables upon receiving due notice of their location and the intention to repair or replace them.

Article 52

Right of innocent passage

1. Subject to article 53 and without prejudice to article 50, ships of all States enjoy the right of innocent passage through archipelagic waters, in accordance with Part II, section 3.

2. The archipelagic State may, without discrimination in form or in fact among foreign ships, suspend temporarily in specified areas of its archipelagic waters the innocent passage of foreign ships if such suspension is essential for the protection of its security. Such suspension shall take effect only after having been duly published.

Article 53

Right of archipelagic sea lanes passage

1. An archipelagic State may designate sea lanes and air routes suitable, for the continuous and expeditious passage of foreign ships and aircraft through or over its archipelagic waters and the adjacent territorial sea.
2. All ships and aircraft enjoy the right of archipelagic sea lanes passage in such sea lanes and air routes.

3. Archipelagic sea lanes passage means the exercise in accordance with this Convention of the rights of navigation and overflight in the normal mode solely for the purpose of continuous, expeditious and unobstructed transit between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone.

4. Such sea lanes and air routes shall traverse the archipelagic waters and the adjacent territorial sea and shall include all normal passage routes used as routes for international navigation or overflight through or over archipelagic waters and, within such routes, so far as ships are concerned, all normal navigational channels, provided that duplication of routes of similar convenience between the same entry and exit points shall not be necessary.

5. Such sea lanes and air routes shall be defined by a series of continuous axis lines from the entry points of passage routes to the exit points. Ships and aircraft in archipelagic sea lanes passage shall not deviate more than 25 nautical miles to either side of such axis lines during passage, provided that such ships and aircraft shall not navigate closer to the coasts than 10 per cent of the distance between the nearest points on islands bordering the sea lane.

6. An archipelagic State which designates sea lanes under this article may also prescribe traffic separation schemes for the safe passage of ships through narrow channels in such sea lanes.

7. An archipelagic State may, when circumstances require, after giving public notice thereof, substitute other sea lanes or traffic separation schemes for any sea lanes or traffic separation schemes previously designated or prescribed by it.

8. Such sea lanes and traffic separation schemes shall conform to generally accepted international regulations.

9. In designating or substituting sea lanes or prescribing or substituting traffic separation schemes, an archipelagic State shall refer proposals to the competent international organization with a view to their adoption. The organization may adopt only such sea lanes and traffic separation schemes as may be agreed with the archipelagic State, after which the archipelagic State may designate, prescribe or substitute them.

10. The archipelagic State shall clearly indicate the axis of the sea lanes and the traffic separation schemes designated or prescribed by it on charts to which due publicity shall be given.

11. Ships in archipelagic sea lanes passage shall respect applicable sea lanes and traffic separation schemes established in accordance with this article.

12. If an archipelagic State does not designate sea lanes or air routes, the right of archipelagic sea lanes passage may be exercised through the routes normally used for international navigation.

Article 54
Duties of ships and aircraft during their passage, research and survey activities, duties of the archipelagic State and laws and regulations of the archipelagic State relating to archipelagic sea lanes passage

Articles 39, 40, 42 and 44 apply mutatis mutandis to archipelagic sea lanes passage.

PART V
EXCLUSIVE ECONOMIC ZONE

Article 55
Specific legal régime of the exclusive economic zone

The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal régime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention.

Article 56
Rights, jurisdiction and duties of the coastal State in the exclusive economic zone

1. In the exclusive economic zone, the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters contiguous to the sea-bed and of the subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;

(b) jurisdiction as provided for in the relevant provisions of this Convention with regard to:

(i) the establishment and use of artificial islands, installations and structures;

(ii) marine scientific research;

(iii) the protection and preservation of the marine environment;

(c) other rights and duties provided for in this Convention.

2. In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State shall have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention.

3. The rights set out in this article with respect to the sea-bed and subsoil shall be exercised in accordance with Part VI.
Article 57

Breadth of the exclusive economic zone

The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

Article 58

Rights and duties of other States
in the exclusive economic zone

1. In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention.

2. Articles 88 to 115 and other pertinent rules of international law apply to the exclusive economic zone in so far as they are not incompatible with this Part.

3. In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.

Article 59

Basis for the resolution of conflicts regarding the attribution of rights and jurisdiction in the exclusive economic zone

In cases where this Convention does not attribute rights or jurisdiction to the coastal State or to other States within the exclusive economic zone, and a conflict arises between the interests of the coastal State and any other State or States, the conflict should be resolved on the basis of equity and in the light of relevant circumstances, taking into account the respective importance of the interests involved to the parties as well as to the international community as a whole.

Article 60

Artificial islands, installations and structures in the exclusive economic zone

1. In the exclusive economic zone, the coastal State shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of:

(a) artificial islands;

(b) installations and structures for the purposes provided for in article 56 and other economic purposes;

(c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.

2. The coastal State shall have exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.

3. Due notice must be given of the construction of such artificial islands, installations or structures, and permanent means for giving warning of their presence must be maintained. Any installations or structures which are abandoned or dissolved shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.

4. The coastal State may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.

5. The breadth of the safety zones shall be determined by the coastal State, taking into account applicable international standards. Such zones shall be designed to ensure that they are reasonably related to the nature and function of the artificial islands, installations or structures, and shall not exceed a distance of 200 nautical miles from the islands, measured from each point of their outer edge, except as authorized by generally accepted international standards or as recommended by the competent international organization. Due notice shall be given of the extent of safety zones.

6. All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones.

7. Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.

8. Artificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

Article 61

Conservation of the living resources

1. The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone.

2. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall co-operate to this end.
3. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.

4. In taking such measures the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.

5. Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned, including States whose nationals are allowed to fish in the exclusive economic zone.

Article 62
Utilization of the living resources

1. The coastal State shall promote the objective of optimum utilization of the living resources in the exclusive economic zone without prejudice to article 61.

2. The coastal State shall determine its capacity to harvest the living resources of the exclusive economic zone. Where the coastal State does not have the capacity to harvest the entire allowable catch, it shall, through agreements or other arrangements and pursuant to the terms, conditions, laws and regulations referred to in paragraph 4, give other States access to the surplus of the allowable catch, having particular regard to the provisions of articles 69 and 70, especially in relation to the developing States mentioned therein.

3. In giving access to other States to its exclusive economic zone under this article, the coastal State shall take into account all relevant factors, including, inter alia, the significance of the living resources of the area to the economy of the coastal State concerned and its other national interests, the provisions of articles 69 and 70, the requirements of developing States in the subregion or region in harvesting part of the surplus and the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks.

4. Nationals of other States fishing in the exclusive economic zone shall comply with the conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State. These laws and regulations shall be consistent with this Convention and may reduct, inter alia, to the following:

(a) licensing of fishermen, fishing vessels and equipment, including payment of fees and other forms of remuneration, which, in the case of developing coastal States, may consist of adequate compensation in the field of financing, equipment and technology relating to the fishing industry;

(b) determining the species which may be caught, and fixing quotas of catch, whether in relation to particular stocks or groups of stocks or catch per vessel over a period of time or to the catch by nationals of any State during a specified period;

(c) regulating seasons and areas of fishing, the types, sizes and amount of gear, and the types, sizes and number of fishing vessels that may be used;

(d) fixing the age and size of fish and other species that may be caught;

(e) specifying information required of fishing vessels, including catch and effort statistics and vessel position reports;

(f) requiring, under the authorization and control of the coastal State, the conduct of specified fisheries research programmes and regulating the conduct of such research, including the sampling of catches, disposition of samples and reporting of associated scientific data;

(g) the placing of observers or trainees on board such vessels by the coastal State;

(h) the landing of all or any part of the catch by such vessels in the ports of the coastal State;

(i) terms and conditions relating to joint ventures or other co-operative arrangements;

(j) requirements for the training of personnel and the transfer of fisheries technology, including enhancement of the coastal State's capability of undertaking fisheries research;

(k) enforcement procedures.

5. Coastal States shall give due notice of conservation and management laws and regulations.

Article 63
Stocks occurring within the exclusive economic zones of two or more coastal States or both within the exclusive economic zone and in an area beyond and adjacent to it

1. Where the same stock or stocks of associated species occur within the exclusive economic zones of two or more coastal States, these States shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary to co-ordinate and ensure the conservation and development of such stocks without prejudice to the other provisions of this Part.

2. Where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone, the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area.
Article 64

Highly migratory species

1. The coastal State and other States whose nationals fish in the region for the highly migratory species listed in Annex I shall co-operate directly or through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilisation of such species throughout the region, both within and beyond the exclusive economic zone. In regions for which no appropriate international organization exists, the coastal State and other States whose nationals harvest these species in the region shall co-operate to establish such an organisation and participate in its work.

2. The provisions of paragraph 1 apply in addition to the other provisions of this Part.

Article 65

Marine mammals

Nothing in this Part restricts the right of a coastal State or the competence of an international organisation, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in this Part. States shall co-operate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organisations for their conservation, management and study.

Article 66

Anadromous stocks

1. States in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks.

2. The State of origin of anadromous stocks shall ensure their conservation by the establishment of appropriate regulatory measures for fishing in all waters landward of the outer limits of its exclusive economic zone and for fishing provided for in paragraph 3(b). The State of origin may, after consultations with the other States referred to in paragraphs 3 and 4 fishing these stocks, establish total allowable catch for stocks originating in its rivers.

3. (a) Fisheries for anadromous stocks shall be conducted only in waters landward of the outer limits of exclusive economic zones, except in cases where this provision would result in economic dislocation for a State other than the State of origin. With respect to such fishing beyond the outer limits of the exclusive economic zone, States concerned shall maintain consultations with a view to achieving agreement on terms and conditions of such fishing giving due regard to the conservation requirements and the needs of the State of origin in respect of these stocks.

(b) The State of origin shall co-operate in minimising economic dislocation in such other States fishing these stocks, taking into account the normal catch and the mode of operations of such States, and all the areas in which such fishing has occurred.

(c) States referred to in subparagraph (b), participating by agreement with the State of origin in measures to renew anadromous stocks, particularly by expenditures for that purpose, shall be given special consideration by the State of origin in the harvesting of stocks originating in its rivers.

(d) Enforcement of regulations regarding anadromous stocks beyond the exclusive economic zone shall be by agreement between the State of origin and the other States concerned.

4. In cases where anadromous stocks migrate into or through the waters landward of the outer limits of the exclusive economic zone of a State other than the State of origin, such State shall co-operate with the State of origin with regard to the conservation and management of such stocks.

5. The State of origin of anadromous stocks and other States fishing these stocks shall make arrangements for the implementation of the provisions of this article, where appropriate, through regional organizations.

Article 67

Catadromous species

1. A coastal State in whose waters catadromous species spend the greater part of their life cycle shall have responsibility for the management of these species and shall ensure the ingress and egress of migrating fish.

2. Harvesting of catadromous species shall be conducted only in waters landward of the outer limits of exclusive economic zones. When conducted in exclusive economic zones, harvesting shall be subject to this article and the other provisions of this Convention concerning fishing in these zones.

3. In cases where catadromous fish migrate through the exclusive economic zone of another State, whether as juvenile or maturing fish, the management, including harvesting, of such fish shall be regulated by agreement between the States mentioned in paragraph 1 and the other State concerned. Such agreement shall ensure the rational management of the species and take into account the responsibilities of the State mentioned in paragraph 1 for the maintenance of these species.

Article 68

Sedentary species

This Part does not apply to sedentary species as defined in article 77, paragraph 4.

Article 69

Right of land-locked States

1. Land-locked States shall have the right to participate, on an equitable basis, in the exploitation of an appropriate part of the surplus of the living resources of the exclusive economic zones of coastal States of the same subregion or region, taking into account the relevant economic and geographical circumstances of all the States concerned and in conformity with the provisions of this article and of articles 61 and 62.

2. The terms and modalities of such participation shall be established by the States concerned through bilateral, subregional or regional agreements taking into account, inter alia:
(a) the need to avoid effects detrimental to fishing communities or fishing industries of the coastal State;

(b) the extent to which the land-locked State, in accordance with the provisions of this article, is participating or is entitled to participate under existing bilateral, subregional or regional agreements in the exploitation of living resources of the exclusive economic zones of other coastal States;

(c) the extent to which other land-locked States and geographically disadvantaged States are participating in the exploitation of the living resources of the exclusive economic zone of the coastal State and the consequent need to avoid a particular burden for any single coastal State or a part of it;

(d) the nutritional needs of the populations of the respective States.

3. When the harvesting capacity of a coastal State approaches a point which would enable it to harvest the entire allowable catch of the living resources in its exclusive economic zone, the coastal State and other States concerned shall co-operate in the establishment of equitable arrangements on a bilateral, subregional or regional basis to allow for participation of developing land-locked States of the same subregion or region in the exploitation of the living resources of the exclusive economic zones of coastal States of the subregion or region, as may be appropriate in the circumstances and on terms satisfactory to all parties. In the implementation of this provision the factors mentioned in paragraph 2 shall also be taken into account.

4. Developed land-locked States shall, under the provisions of this article, be entitled to participate in the exploitation of living resources only in the exclusive economic zones of developed coastal States of the same subregion or region having regard to the extent to which the coastal State, in giving access to other States to the living resources of its exclusive economic zone, has taken into account the need to minimise detrimental effects on fishing communities and economic dislocation in States whose nationals have habitually fished in the zone.

5. The above provisions are without prejudice to arrangements agreed upon in subregions or regions where the coastal States may grant to land-locked States of the same subregion or region equal or preferential rights for the exploitation of the living resources in the exclusive economic zones.

**Article 70**

**Right of geographically disadvantaged States**

1. Geographically disadvantaged States shall have the right to participate, on an equitable basis, in the exploitation of an appropriate part of the surplus of the living resources of the exclusive economic zones of coastal States of the same subregion or region, taking into account the relevant economic and geographical circumstances of all the States concerned and in conformity with the provisions of this article and of articles 61 and 62.

2. For the purposes of this Part, "geographically disadvantaged States" means coastal States, including States bordering enclosed or semi-enclosed seas, whose geographical situation makes them dependent upon the exploitation of the living resources of the exclusive economic zones of other States in the subregion or region for adequate supplies of fish for the nutritional purposes of their populations or parts thereof, and coastal States which can claim no exclusive economic zones of their own.

3. The terms and modalities of such participation shall be established by the States concerned through bilateral, subregional or regional agreements taking into account, inter alia:

(a) the need to avoid effects detrimental to fishing communities or fishing industries of the coastal State;

(b) the extent to which the geographically disadvantaged State, in accordance with the provisions of this article, is participating or is entitled to participate under existing bilateral, subregional or regional agreements in the exploitation of living resources of the exclusive economic zones of other coastal States;

(c) the extent to which other geographically disadvantaged States and land-locked States are participating in the exploitation of the living resources of the exclusive economic zone of the coastal State and the consequent need to avoid a particular burden for any single coastal State or a part of it;

(d) the nutritional needs of the populations of the respective States.

4. When the harvesting capacity of a coastal State approaches a point which would enable it to harvest the entire allowable catch of the living resources in its exclusive economic zone, the coastal State and other States concerned shall co-operate in the establishment of equitable arrangements on a bilateral, subregional or regional basis to allow for participation of developing geographically disadvantaged States of the same subregion or region in the exploitation of the living resources of the exclusive economic zones of coastal States of the subregion or region, as may be appropriate in the circumstances and on terms satisfactory to all parties. In the implementation of this provision the factors mentioned in paragraph 3 shall also be taken into account.

5. Developed geographically disadvantaged States shall, under the provisions of this article, be entitled to participate in the exploitation of living resources only in the exclusive economic zones of developed coastal States of the same subregion or region having regard to the extent to which the coastal State, in giving access to other States to the living resources of its exclusive economic zone, has taken into account the need to minimise detrimental effects on fishing communities and economic dislocation in States whose nationals have habitually fished in the zone.

6. The above provisions are without prejudice to arrangements agreed upon in subregions or regions where the coastal States may grant to geographically disadvantaged States of the same subregion or region equal or preferential rights for the exploitation of the living resources in the exclusive economic zones.
Article 71
Non-applicability of articles 69 and 70

The provisions of articles 69 and 70 do not apply in the case of a coastal State whose economy is overwhelmingly dependent on the exploitation of the living resources of its exclusive economic zone.

Article 72
Restrictions on transfer of rights

1. Rights provided under articles 69 and 70 to exploit living resources shall not be directly or indirectly transferred to third States or their nationals by lease or licence, by establishing joint ventures or in any other manner which has the effect of such transfer unless otherwise agreed by the States concerned.

2. The foregoing provision does not preclude the States concerned from obtaining technical or financial assistance from third States or international organizations in order to facilitate the exercise of the rights pursuant to articles 69 and 70, provided that it does not have the effect referred to in paragraph 1.

Article 73
Enforcement of laws and regulations of the coastal State

1. The coastal State may, in the exercise of its sovereign rights to explore, exploit, conserve and manage the living resources in the exclusive economic zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.

2. Arrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security.

3. Coastal State penalties for violations of fisheries laws and regulations in the exclusive economic zone may not include imprisonment, in the absence of agreements to the contrary by the States concerned, or any other form of corporal punishment.

4. In cases of arrest or detention of foreign vessels the coastal State shall promptly notify the flag State, through appropriate channels, of the action taken and of any penalties subsequently imposed.

Article 74
Delimitation of the exclusive economic zone between States with opposite or adjacent coasts

1. The delimitation of the exclusive economic zone between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 36 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

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.

3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

4. 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.

Article 75
Charts and lists of geographical co-ordinates

1. Subject to this Part, the outer limit lines of the exclusive economic zone and the lines of delimitation drawn in accordance with Article 74 shall be shown on charts of a scale or scales adequate for ascertaining their position. Where appropriate, lists of geographical co-ordinates of points, specifying the geodetic datum, may be substituted for such outer limit lines or lines of delimitation.

2. The coastal State shall give due publicity to such charts or lists of geographical co-ordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations.

PART VI
CONTINENTAL SHELF

Article 76
Definition of the continental shelf

1. 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 baseline 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.

2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.

4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or
(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.

5. The fixed points comprising the line of the outer limits of the continental shelf on the sea-bed, drawn in accordance with paragraph 4 (a) (i) and (ii), shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.

6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

7. The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by co-ordinates of latitude and longitude.

8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.

10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.

Article 77
Rights of the coastal State over the continental shelf

1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in this Part consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil.

Article 78
Legal status of the superjacent waters and air space and the rights and freedoms of other States

1. The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters or of the air space above those waters.

2. The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.

Article 79
Submarine cables and pipelines on the continental shelf

1. All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article.

2. Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines.

3. The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.

4. Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.

5. When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.

Article 80
Artificial islands, installations and structures on the continental shelf

Article 60 applies mutatis mutandis to artificial islands, installations and structures on the continental shelf.
Article 81
Drilling on the continental shelf

The coastal State shall have the exclusive right to authorise and regulate drilling on the continental shelf for all purposes.

Article 82
Payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles.

1. The coastal State shall make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

2. The payments and contributions shall be made annually with respect to all production at a site after the first five years of production at that site. For the sixth year, the rate of payment or contribution shall be 1 per cent of the value or volume of production at the site. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 7 per cent thereafter. Production does not include resources used in connection with exploitation.

3. A developing State which is a net importer of a mineral resource produced from its continental shelf is exempt from making such payments or contributions in respect of that mineral resource.

4. The payments or contributions shall be made through the Authority, which shall distribute them to States Parties to this Convention, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States, particularly the least developed and the land-locked among them.

Article 83
Delimitation of the continental shelf between States with opposite or adjacent coasts

1. The delimitation of the continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

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.

3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardise or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

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.

Article 84
Charts and lists of geographical co-ordinates

1. Subject to this Part, the outer limit lines of the continental shelf and the lines of delimitation drawn in accordance with article 83 shall be shown on charts of a scale or scales adequate for ascertaining their position. Where appropriate, lists of geographical co-ordinates of points, specifying the geodetic datum, may be substituted for such outer limit lines or lines of delimitation.

2. The coastal State shall give due publicity to such charts or lists of geographical co-ordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations and, in the case of those showing the outer limit lines of the continental shelf, with the Secretary-General of the Authority.

Article 85
Tunnelling

This Part does not prejudice the right of the coastal State to exploit the subsoil by means of tunnelling, irrespective of the depth of water above the subsoil.

PART VII
HIGH SEAS

SECTION I. GENERAL PROVISIONS

Article 86
Application of the provisions of this Part

The provisions of this Part apply to all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State. This article does not entail any abridgement of the freedoms enjoyed by all States in the exclusive economic zone in accordance with article 56.

Article 87
Freedom of the high seas

1. The high seas are open to all States, whether coastal or land-locked. Freedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of international law. It comprises, inter alia, both for coastal and land-locked States:

(a) freedom of navigation;
(b) freedom of overflight;
(c) freedom to lay submarine cables and pipelines, subject to Part VI;
(d) freedom to construct artificial islands and other installations permitted under international law, subject to Part VI;
(e) freedom of fishing, subject to the conditions laid down in section 2;
(f) freedom of scientific research, subject to Parts VI and XIII.

2. These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in the Area.

Article 88
Reservation of the high seas for peaceful purposes

The high seas shall be reserved for peaceful purposes.

Article 89
Invalidity of claims of sovereignty over the high seas

No State may validly purport to subject any part of the high seas to its sovereignty.

Article 90
Right of navigation

Every State, whether coastal or land-locked, has the right to sail ships flying its flag on the high seas.

Article 91
Nationality of ships

1. Every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between the State and the ship.

2. Every State shall issue to ships to which it has granted the right to fly its flag documents to that effect.

Article 92
Status of ships

1. Ships shall sail under the flag of one State only and, save in exceptional cases expressly provided for in international treaties or in this Convention, shall be subject to its exclusive jurisdiction on the high seas. A ship may not change its flag during a voyage or while in a port of call, save in the case of a real transfer of ownership or change of registry.

2. A ship which sails under the flags of two or more States, using them according to convenience, may not claim any of the nationalities in question with respect to any other State, and may be assimilated to a ship without nationality.

Article 93
Ships flying the flag of the United Nations, its specialised agencies and the International Atomic Energy Agency

The preceding articles do not prejudice the question of ships employed on the official service of the United Nations, its specialised agencies or the International Atomic Energy Agency, flying the flag of the organization.

Article 94
Duties of the flag State

1. Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.

2. In particular every State shall:

(a) maintain a register of ships containing the names and particulars of ships flying its flag, except those which are excluded from generally accepted international regulations on account of their small size; and

(b) assume jurisdiction under its internal law over each ship flying its flag and its master, officers and crew in respect of administrative, technical and social matters concerning the ship.

3. Every State shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to:

(a) the construction, equipment and seaworthiness of ships;

(b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments;

(c) the use of signals, the maintenance of communications and the prevention of collisions.

4. Such measures shall include those necessary to ensure:

(a) that each ship, before registration and thereafter at appropriate intervals, is surveyed by a qualified surveyor of ships, and that on board such charts, nautical publications and navigational equipment and instruments as are appropriate for the safe navigation of the ship;

(b) that each ship is in the charge of a master and officers who possess appropriate qualifications, in particular in seamanship, navigation, communications and marine engineering, and that the crew is appropriate in qualification and numbers for the type, size, machinery and equipment of the ship;

(c) that the master, officers and, to the extent appropriate, the crew are fully conversant with and required to observe the applicable international regulations concerning the safety of life at sea, the prevention of collisions, the prevention, reduction and control of marine pollution, and the maintenance of communications by radio.

5. In taking the measures called for in paragraphs 3 and 4 each State is required to conform to generally accepted international regulations, procedures and practices and to take any steps which may be necessary to secure their observance.

6. A State which has clear grounds to believe that proper jurisdiction and control with respect to a ship have not been exercised may report the facts to the flag State. Upon receiving such a report, the flag State shall investigate the matter and, if appropriate, take any action necessary to remedy the situation.
7. Each State shall cause an inquiry to be held by or before a suitably qualified person or persons into every marine casualty or incident of navigation on the high seas involving a ship flying its flag and causing loss of life or serious injury to nationals of another State or serious damage to ships or installations of another State or to the marine environment. The flag State and the other State shall co-operate in the conduct of any inquiry held by that other State into any such marine casualty or incident of navigation.

**Article 95**
Immunity of warships on the high seas

Warships on the high seas have complete immunity from the jurisdiction of any State other than the flag State.

**Article 96**
Immunity of ships used only on government non-commercial service

Ships owned or operated by a State and used only on government non-commercial service shall, on the high seas, have complete immunity from the jurisdiction of any State other than the flag State.

**Article 97**
Penal Jurisdiction in matters of collision or any other incident of navigation

1. In the event of a collision or any other incident of navigation concerning a ship on the high seas, involving the penal or disciplinary responsibility of the master or of any other person in the service of the ship, no penal or disciplinary proceedings may be instituted against such person except before the judicial or administrative authorities either of the flag State or of the State of which such person is a national.

2. In disciplinary matters, the State which has issued a master's certificate or a certificate of competence or licence shall alone be competent, after due legal process, to pronounce the withdrawal of such certificates, even if the holder is not a national of the State which issued them.

3. No arrest or detention of the ship, even as a measure of investigation, shall be ordered by any authorities other than those of the flag State.

**Article 98**
Duty to render assistance

1. Every State shall require the master of a ship flying its flag, in so far as he can do so without serious danger to the ship, the crew or the passengers:

(a) to render assistance to any person found at sea in danger of being lost;

(b) to proceed with all possible speed to the rescue of persons in distress, if informed of their need of assistance, in so far as such action may reasonably be expected of him;

(c) after a collision, to render assistance to the other ship, its crew and its passengers and, where possible, to inform the other ship of the name of his own ship, its port of registry and the nearest port at which it will call.

2. Every coastal State shall promote the establishment, operation and maintenance of an adequate and effective search and rescue service regarding safety on and over the sea and, where circumstances so require, by way of mutual regional arrangements co-operate with neighbouring States for this purpose.

**Article 99**
Prohibition of the transport of slaves

Every State shall take effective measures to prevent and punish the transport of slaves in ships authorized to fly its flag and to prevent the unlawful use of its flag for that purpose. Any slave taking refuge on board any ship, whatever its flag, shall ipso facto be free.

**Article 100**
Duty to co-operate in the repression of piracy

All States shall co-operate to the fullest possible extent in the repression of piracy on the high seas or in any other place outside the jurisdiction of any State.

**Article 101**
Definition of piracy

Piracy consists of any of the following acts:

(a) any illegal acts of violence or detention, or any act of deprivation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:

(i) on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft;

(ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;

(b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;

(c) any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b).

**Article 102**
Piracy by a warship, government ship or government aircraft whose crew has mutinied

The acts of piracy, as defined in article 101, committed by a warship, government ship or government aircraft whose crew has mutinied and taken control of the ship or aircraft are assimilated to acts committed by a private ship or aircraft.
Article 103

Definition of a pirate ship or aircraft

A ship or aircraft is considered a pirate ship or aircraft if it is intended by the persons in control to be used for the purpose of committing one of the acts referred to in article 101. The same applies if the ship or aircraft has been used to commit any such act, so long as it remains under the control of the persons guilty of that act.

Article 104

Retention or loss of the nationality of a pirate ship or aircraft

A ship or aircraft may retain its nationality although it has become a pirate ship or aircraft. The retention or loss of nationality is determined by the law of the State from which such nationality was derived.

Article 105

Seizure of a pirate ship or aircraft

On the high seas, or in any other place outside the jurisdiction of any State, every State may seize a pirate ship or aircraft, or a ship or aircraft taken by piracy and under the control of pirates, and arrest the persons and seize the property on board. The courts of the State which carried out the seizure may decide upon the penalties to be imposed, and may also determine the action to be taken with regard to the ships, aircraft or property, subject to the rights of third parties acting in good faith.

Article 106

Liability for seizure without adequate grounds

Where the seizure of a ship or aircraft on suspicion of piracy has been effected without adequate grounds, the State making the seizure shall be liable to the State the nationality of which is possessed by the ship or aircraft for any loss or damage caused by the seizure.

Article 107

Ships and aircraft which are entitled to seize on account of piracy

A seizure on account of piracy may be carried out only by warships or military aircraft, or other ships or aircraft clearly marked and identifiable as being on government service and authorized to that effect.

Article 108

Illicit traffic in narcotic drugs or psychotropic substances

1. All States shall co-operate in the suppression of illicit traffic in narcotic drugs and psychotropic substances engaged in by ships on the high seas contrary to international conventions.

2. Any State which has reasonable grounds for believing that a ship flying its flag is engaged in illicit traffic in narcotic drugs or psychotropic substances may request the co-operation of other States to suppress such traffic.

Article 109

Unauthorized broadcasting from the high seas

1. All States shall co-operate in the suppression of unauthorized broadcasting from the high seas.

2. For the purposes of this Convention, "unauthorized broadcasting" means the transmission of sound radio or television broadcasts from a ship or installation on the high seas intended for reception by the general public contrary to international regulations, but excluding the transmission of distress calls.

3. Any person engaged in unauthorized broadcasting may be prosecuted before the court of:
   (a) the flag State of the ship;
   (b) the State of registry of the installation;
   (c) the State of which the person is a national;
   (d) any State where the transmissions can be received; or
   (e) any State where authorized radio communication is suffering interference.

4. On the high seas, a State having jurisdiction in accordance with paragraph 3 may, in conformity with article 111, arrest any person or ship engaged in unauthorized broadcasting and seize the broadcasting apparatus.

Article 110

Right of visit

1. Except where acts of interference derive from powers conferred by treaty, a warship which encounters on the high seas a foreign ship, other than a ship entitled to complete immunity in accordance with articles 95 and 96, is not justified in boarding it unless there is reasonable ground for suspecting that:
   (a) the ship is engaged in piracy;
   (b) the ship is engaged in the slave trade;
   (c) the ship is engaged in unauthorized broadcasting and the flag State of the warship has jurisdiction under article 109;
   (d) the ship is without nationality; or
   (e) though flying a foreign flag or refusing to show its flag, the ship is, in reality, of the same nationality as the warship.

2. In the cases provided for in paragraph 1, the warship may proceed to verify the ship's right to fly its flag. To this end, it may send a boat under the command of an officer to the suspected ship. If suspicion remains after the documents have been checked, it may proceed to a further examination on board the ship, which must be carried out with all possible consideration.

3. If the suspicions prove to be unfounded, and provided that the ship boarded has not committed any act justifying them, it shall be compensated for any loss or damage that may have been sustained.
4. These provisions apply mutatis mutandis to military aircraft.

5. These provisions also apply to any other duly authorized ships or aircraft clearly marked and identifiable as being on government service.

Article 111
Right of hot pursuit

1. The hot pursuit of a foreign ship may be undertaken when the competent authorities of the coastal State have good reason to believe that the ship has violated the laws and regulations of that State. Such pursuit must be commenced when the foreign ship or one of its boats is within the internal waters, the archipelagic waters, the territorial sea or the contiguous zone of the pursuing State, and may only be continued outside the territorial sea or the contiguous zone if the pursuit has not been interrupted. It is not necessary that, at the time when the foreign ship within the territorial sea or the contiguous zone receives the order to stop, the ship giving the order should likewise be within the territorial sea or the contiguous zone. If the foreign ship is within a contiguous zone, as defined in article 33, the pursuit may only be undertaken if there has been a violation of the rights for the protection of which the zone was established.

2. The right of hot pursuit shall apply mutatis mutandis to violations in the exclusive economic zone or on the continental shelf, including safety zones around continental shelf installations, of the laws and regulations of the coastal State applicable in accordance with this Convention to the exclusive economic zone or the continental shelf, including such safety zones.

3. The right of hot pursuit ceases as soon as the ship pursued enters the territorial sea of its own State or of a third State.

4. Hot pursuit is not deemed to have begun unless the pursuing ship has satisfied itself by such practicable means as may be available that the ship pursued or one of its boats or other craft working as a team and using the ship pursued as a mother ship is within the limits of the territorial sea, or, as the case may be, within the contiguous zone or the exclusive economic zone or above the continental shelf. The pursuit may only be commenced after a visual or auditory signal to stop has been given at a distance which enables it to be seen or heard by the foreign ship.

5. The right of hot pursuit may be exercised only by warships or military aircraft, or other ships or aircraft clearly marked and identifiable as being on government service and authorized to that effect.

6. Where hot pursuit is effected by an aircraft:

(a) the provisions of paragraphs 1 to 4 shall apply mutatis mutandis;

(b) the aircraft giving the order to stop must itself actively pursue the ship until a ship or another aircraft of the coastal State, summoned by the aircraft, arrives to take over the pursuit, unless the aircraft is itself able to arrest the ship. It does not suffice to justify an arrest outside the territorial sea that the ship was merely sighted by the aircraft as an offender or suspected offender, if it was not both ordered to stop and pursued by the aircraft itself or other aircraft or ships which continue the pursuit without interruption.

7. The release of a ship arrested within the jurisdiction of a State and escorted to a port of that State for the purposes of an inquiry before the competent authorities may not be claimed solely on the ground that the ship, in the course of its voyage, was escorted across a portion of the exclusive economic zone or the high seas, if the circumstances rendered this necessary.

8. Where a ship has been stopped or arrested outside the territorial sea in circumstances which do not justify the exercise of the right of hot pursuit, it shall be compensated for any loss or damage that may have been thereby sustained.

Article 112
Right to lay submarine cables and pipelines

1. All States are entitled to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf.

2. Article 79, paragraph 5, applies to such cables and pipelines.

Article 113
Breaking or injury of a submarine cable or pipeline

Every State shall adopt the laws and regulations necessary to provide that the breaking or injury by a ship flying its flag or by a person subject to its jurisdiction of a submarine cable beneath the high seas done wilfully or through culpable negligence, in such a manner as to be liable to interrupt or obstruct telegraphic or telephonic communications, and similarly the breaking or injury of a submarine pipeline or high-voltage power cable, shall be a punishable offence. This provision shall apply also to conduct calculated or likely to result in such breaking or injury. However, it shall not apply to any break or injury caused by persons who acted merely with the legitimate object of saving their lives or their ships, after having taken all necessary precautions to avoid such break or injury.

Article 114
breaking or injury by owners of a submarine cable or pipeline of another submarine cable or pipeline

Every State shall adopt the laws and regulations necessary to provide that, if persons subject to its jurisdiction who are the owners of a submarine cable or pipeline beneath the high seas, in laying or repairing that cable or pipeline, cause a break in or injury to another cable or pipeline, they shall bear the cost of the repairs.

Article 115
Indemnity for loss incurred in avoiding injury to a submarine cable or pipeline

Every State shall adopt the laws and regulations necessary to ensure that the owners of ships who can prove that they have sacrificed an anchor, a net or any other fishing gear, in order to avoid injuring a submarine cable or pipeline, shall be indemnified by the owner of the cable or pipeline, provided that the owner of the ship has taken all reasonable precautionary measures beforehand.
SECTION 2. CONSERVATION AND MANAGEMENT OF THE LIVING RESOURCES OF THE HIGH SEAS

Article 116
Right to fish on the high seas

All States have the right for their nationals to engage in fishing on the high seas subject to:

(a) their treaty obligations;

(b) the rights and duties as well as the interests of coastal States provided for, inter alia, in article 63, paragraph 2, and articles 64 to 67; and

(c) the provisions of this section.

Article 117
Duty of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas

All States have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas.

Article 118
Co-operation of States in the conservation and management of living resources

States shall co-operate with each other in the conservation and management of living resources in the areas of the high seas. States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned. They shall, as appropriate, co-operate to establish subregional or regional fisheries organizations to this end.

Article 119
Conservation of the living resources of the high seas

1. In determining the allowable catch and establishing other conservation measures for the living resources in the high seas, States shall:

(a) take measures which are designed, on the best scientific evidence available to the States concerned, to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global;

(b) take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.

2. Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned.

3. States concerned shall ensure that conservation measures and their implementation do not discriminate in form or in fact against the fishermen of any State.

Article 120
Marine mammals

Article 65 also applies to the conservation and management of marine mammals in the high seas.

PART VIII
REGIME OF ISLANDS

Article 121
Régime of Islands

1. An island is a naturally formed area of land, surrounded by water, which is above water at high tide.

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 this Convention applicable to other land territory.

3. Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.

PART IX
ENCLOSED OR SEMI-ENCLOSED SEAS

Article 122
Definition

For the purposes of this Convention, "enclosed or semi-enclosed sea" means a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States.
Article 123
Co-operation of States bordering enclosed or semi-enclosed seas

States bordering an enclosed or semi-enclosed sea should co-operate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organisation:

(a) to co-ordinate the management, conservation, exploration and exploitation of the living resources of the sea;

(b) to co-ordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;

(c) to co-ordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;

(d) to invite, as appropriate, other interested States or international organizations to co-operate with them in furtherance of the provisions of this article.

PART X
RIGHT OF ACCESS OF LAND-LOCKED STATES TO AND FROM THE SEA AND FREEDOM OF TRANSIT

Article 124
Use of terms

1. For the purposes of this Convention:

(a) "land-locked State" means a State which has no sea-coast;

(b) "transit State" means a State, with or without a sea-coast, situated between a land-locked State and the sea, through whose territory traffic in transit passes;

(c) "traffic in transit" means transit of persons, baggage, goods and means of transport across the territory of one or more transit States, when the passage across such territory, with or without trans-shipment, warehousing, breaking bulk or change in the mode of transport, is only a portion of a complete journey which begins or terminates within the territory of the land-locked State;

(d) "means of transport" means:

(i) railway rolling stock, sea, lake and river craft and road vehicles;

(ii) where local conditions so require, porters and pack animals.

2. Land-locked States and transit States may, by agreement between them, include as means of transport pipelines and gas lines and means of transport other than those included in paragraph 1.

Article 125
Right of access to and from the sea and freedom of transit

1. Land-locked States shall have the right of access to and from the sea for the purpose of exercising the rights provided for in this Convention including those relating to the freedom of the high seas and the common heritage of mankind. To this end, land-locked States shall enjoy freedom of transit through the territory of transit States by all means of transport.

2. The terms and modalities for exercising freedom of transit shall be agreed between the land-locked States and transit States concerned through bilateral, subregional or regional agreements.

3. Transit States, in the exercise of their full sovereignty over their territory, shall have the right to take all measures necessary to ensure that the rights and facilities provided for in this Part for land-locked States shall in no way infringe their legitimate interests.

Article 126
Exclusion of application of the most-favoured-nation clause

The provisions of this Convention, as well as special agreements relating to the exercise of the right of access to and from the sea, establishing rights and facilities on account of the special geographical position of land-locked States, are excluded from the application of the most-favoured-nation clause.

Article 127
Customs duties, taxes and other charges

1. Traffic in transit shall not be subject to any customs duties, taxes or other charges except charges levied for specific services rendered in connection with such traffic.

2. Means of transport in transit and other facilities provided for and used by land-locked States shall not be subject to taxes or charges higher than those levied for the use of means of transport of the transit State.

Article 128
Free zones and other customs facilities

For the convenience of traffic in transit, free zones or other customs facilities may be provided at the ports of entry and exit in the transit States, by agreement between those States and the land-locked States.

Article 129
Co-operation in the construction and improvement of means of transport

Where there are no means of transport in transit States to give effect to the freedom of transit or where the existing means, including the port installations and equipment, are inadequate in any respect, the transit States and land-locked States concerned may co-operate in constructing or improving them.
Article 130

Measures to avoid or eliminate delays or other difficulties of a technical nature in traffic in transit

1. Transit States shall take all appropriate measures to avoid delays or other difficulties of a technical nature in traffic in transit.

2. Should such delays or difficulties occur, the competent authorities of the transit States and land-locked States concerned shall co-operate towards their expeditious elimination.

Article 131

Equal treatment in maritime ports

Ships flying the flag of land-locked States shall enjoy treatment equal to that accorded to other foreign ships in maritime ports.

Article 132

Grant of greater transit facilities

This Convention does not entail in any way the withdrawal of transit facilities which are greater than those provided for in this Convention and which are agreed between States Parties to this Convention or granted by a State Party. This Convention also does not preclude such grant of greater facilities in the future.

PART XI

THE AREA

SECTION 1. GENERAL PROVISIONS

Article 133

Use of terms

For the purposes of this Part:

(a) "resources" means all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the sea-bed, including polymetallic nodules;

(b) resources, when recovered from the Area, are referred to as "minerals".

Article 134

Scope of this Part

1. This Part applies to the Area.

2. Activities in the Area shall be governed by the provisions of this Part.

3. The requirements concerning deposit of, and publicity to be given to, the charts or lists of geographical co-ordinates showing the limits referred to in article 1, paragraph 1(1), are set forth in Part VI.

Article 135

Legal status of the superjacent waters and air space

Neither this Part nor any rights granted or exercised pursuant thereto shall affect the legal status of the waters superjacent to the Area or that of the air space above those waters.

SECTION 2. PRINCIPLES GOVERNING THE AREA

Article 136

Common heritage of mankind

The Area and its resources are the common heritage of mankind.

Article 137

Legal status of the Area and its resources

1. No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized.

2. All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act. These resources are not subject to alienation. The minerals recovered from the Area, however, may only be alienated in accordance with this Part and the rules, regulations and procedures of the Authority.

3. No State or natural or juridical person shall claim, acquire or exercise rights with respect to the minerals recovered from the Area except in accordance with this Part. Otherwise, no such claim, acquisition or exercise of such rights shall be recognized.

Article 138

General conduct of States in relation to the Area

The general conduct of States in relation to the Area shall be in accordance with the provisions of this Part, the principles embodied in the Charter of the United Nations and other rules of international law in the interests of maintaining peace and security and promoting international co-operation and mutual understanding.
**Article 139**

**Responsibility to ensure compliance and liability for damage**

1. States Parties shall have the responsibility to ensure that activities in the Area, whether carried out by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this Part. The same responsibility applies to international organizations for activities in the Area carried out by such organizations.

2. Without prejudice to the rules of international law and Annex III, article 22, damage caused by the failure of a State Party or international organisation to carry out its responsibilities under this Part shall entail liability; States Parties or international organisations acting together shall bear joint and several liability. A State Party shall not however be liable for damage caused by any failure to comply with this Part by a person whom it has sponsored under article 153, paragraph 2(b), if the State Party has taken all necessary and appropriate measures to secure effective compliance under article 153, paragraph 4, and Annex III, article 4, paragraph 4.

3. States Parties that are members of international organizations shall take appropriate measures to ensure the implementation of this article with respect to such organizations.

**Article 140**

**Benefit of mankind**

1. Activities in the Area shall, as specifically provided for in this Part, be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States, whether coastal or land-locked, and taking into particular consideration the interests and needs of developing States and of peoples who have not attained full independence or other self-governing status recognized by the United Nations in accordance with General Assembly resolution 1514 (XV)\(^1\) and other relevant General Assembly resolutions.

2. The Authority shall provide for the equitable sharing of financial and other economic benefits derived from activities in the Area through any appropriate mechanism, on a non-discriminatory basis, in accordance with article 180, paragraph 2(f)(4).

**Article 141**

**Use of the Area exclusively for peaceful purposes**

The Area shall be open to use exclusively for peaceful purposes by all States, whether coastal or land-locked, without discrimination and without prejudice to the other provisions of this Part.

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Article 144
Transfer of technology

1. The Authority shall take measures in accordance with this Convention to acquire technology and scientific knowledge relating to activities in the Area, and to promote and encourage the transfer to developing States of such technology and scientific knowledge so that all States Parties benefit therefrom. In particular they shall initiate and promote:

(a) programmes for the transfer of technology to the Enterprise and to developing States with regard to activities in the Area, including, inter alia, facilitating the access of the Enterprise and of developing States to the relevant technology, under fair and reasonable terms and conditions;

(b) measures directed towards the advancement of the technology of the Enterprise and the domestic technology of developing States, particularly by providing opportunities to personnel from the Enterprise and from developing States for training in marine science and technology and for their full participation in activities in the Area.

Article 145
Protection of the marine environment

Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for inter alia:

(a) the prevention, reduction and control of pollution and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities;

(b) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.

Article 146
Protection of human life

With respect to activities in the Area, necessary measures shall be taken to ensure effective protection of human life. To this end the Authority shall adopt appropriate rules, regulations and procedures to supplement existing international law as embodied in relevant treaties.

Article 147
Accommodation of activities in the Area and in the marine environment

1. Activities in the Area shall be carried out with reasonable regard for other activities in the marine environment.

2. Installations used for carrying out activities in the Area shall be subject to the following conditions:

(a) such installations shall be erected, placed and removed solely in accordance with this Part and subject to the rules, regulations and procedures of the Authority. Due notice must be given of the erection, emplacement and removal of such installations, and permanent means for giving warning of their presence must be maintained;

(b) such installations may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation or in areas of intense fishing activity;

(c) safety zones shall be established around such installations with appropriate markings to ensure the safety of both navigation and the installations. The configuration and location of such safety zones shall not be such as to form a belt impeding the lawful access of shipping to particular maritime zones or navigation along international sea lanes;

(d) such installations shall be used exclusively for peaceful purposes;

(e) such installations do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

3. Other activities in the marine environment shall be conducted with reasonable regard for activities in the Area.

Article 148
Participation of developing States in activities in the Area

The effective participation of developing States in activities in the Area shall be provided for in this Part, having due regard to their special interests and needs, and in particular to the special need of the land-locked and geographically disadvantaged among them to overcome obstacles arising from their disadvantaged location, including remoteness from the Area and difficulty of access to and from it.

Article 149
Archaeological and historical objects

All objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin.
SECTION 3. DEVELOPMENT OF RESOURCES OF THE AREA

Article 150
Policies relating to activities in the Area

Activities in the Area shall, as specifically provided for in this Part, be carried out in such a manner as to foster healthy development of the world economy and balanced growth of international trade, and to promote international co-operation for the over-all development of all countries, especially developing States, and with a view to ensuring:

(a) the development of the resources of the Area;

(b) orderly, safe and rational management of the resources of the Area, including the efficient conduct of activities in the Area and, in accordance with sound principles of conservation, the avoidance of unnecessary waste;

(c) the expansion of opportunities for participation in such activities consistent in particular with articles 144 and 148;

(d) participation in revenues by the Authority and the transfer of technology to the Enterprise and developing States as provided for in this Convention;

(e) increased availability of the minerals derived from the Area as needed in conjunction with minerals derived from other sources, to ensure supplies to consumers of such minerals;

(f) the promotion of just and stable prices remunerative to producers and fair to consumers for minerals derived both from the Area and from other sources, and the promotion of long-term equilibrium between supply and demand;

(g) the enhancement of opportunities for all States Parties, irrespective of their social and economic systems or geographical location, to participate in the development of the resources of the Area and the prevention of monopolization of activities in the Area;

(h) the protection of developing countries from adverse effects on their economies or on their export earnings resulting from a reduction in the price of an affected mineral, or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area, as provided in article 151;

(i) the development of the common heritage for the benefit of mankind as a whole; and

(j) conditions of access to markets for the imports of minerals produced from the resources of the Area and for imports of commodities produced from such minerals shall not be more favourable than the most favourable applied to imports from other sources.

Article 151
Production policies

1. (a) Without prejudice to the objectives set forth in article 150 and in pursuance of implementing subparagraph (b) of that article, the Authority, acting through existing forums or such new arrangements or agreements as may be appropriate, in which all interested parties, including both producers and consumers, participate, shall take measures necessary to promote the growth, efficiency and stability for those commodities produced from the minerals derived from the Area, at prices remunerative to producers and fair to consumers. All States Parties shall co-operate to this end.

(b) The Authority shall have the right to participate in any commodity conference dealing with those commodities and in which all interested parties including both producers and consumers participate. The Authority shall have the right to become a party to any arrangement or agreement resulting from such conferences. Participation of the Authority in any organs established under those arrangements or agreements shall be in respect of production in the Area and in accordance with the relevant rules of those organs.

(c) The Authority shall carry out its obligations under the arrangements or agreements referred to in this paragraph in a manner which assures a uniform and non-discriminatory implementation in respect of all production in the Area of the minerals concerned. In doing so, the Authority shall act in a manner consistent with the terms of existing contracts and approved plans of work of the Enterprise.

2. (a) During the interim period specified in paragraph 3, commercial production shall not be undertaken pursuant to an approved plan of work until the operator has applied for and has been issued a production authorization by the Authority. Such production authorizations may not be applied for or issued more than five years prior to the planned commencement of commercial production under the plan of work unless, having regard to the nature and timing of project development, the rules, regulations and procedures of the Authority prescribe another period.

(b) In the application for the production authorization, the operator shall specify the annual quantity of nickel expected to be recovered under the approved plan of work. The application shall include a schedule of expenditures to be made by the operator after he has received the authorization which are reasonably calculated to allow him to begin commercial production on the date planned.

(c) For the purposes of subparagraphs (a) and (b), the Authority shall establish appropriate performance requirements in accordance with Annex III, article 17.

(d) The Authority shall issue a production authorization for the level of production applied for unless the sum of that level and the levels already authorized exceeds the nickel production ceiling, as calculated pursuant to paragraph 4 in the year of issuance of the authorization, during any year of planned production falling within the interim period.
5. The Authority shall reserve to the Enterprise for its initial production a quantity of 38,000 metric tonnes of nickel from the available production ceiling calculated pursuant to paragraph 4.

6. An operator may in any year produce less than or up to 8 per cent more than the level of annual production of minerals from poly metallic nodules specified in his production authorization, provided that the over-all amount of production shall not exceed that specified in the authorization. Any excess over 8 per cent and up to 20 per cent in any year, or any excess in the first and subsequent years following two consecutive years in which excesses occur, shall be negotiated with the Authority, which may require the operator to obtain a supplementary production authorization to cover additional production.

7. The levels of production of other metals such as copper, cobalt and manganese extracted from the poly metallic nodules that are recovered pursuant to a production authorization should not be higher than those which would have been produced had the operator produced the maximum level of nickel from those nodules pursuant to this article. The Authority shall establish rules, regulations and procedures pursuant to Annex III, article 17, to implement this paragraph.

8. Rights and obligations relating to unfair economic practices under relevant multilateral trade agreements shall apply to the exploration for and exploitation of minerals from the Area. In the settlement of disputes arising under this provision, States Parties which are Parties to such multilateral trade agreements shall have recourse to the dispute settlement procedures of such agreements.

9. The Authority shall have the power to limit the level of production of minerals from the Area, other than minerals from poly metallic nodules, under such conditions and applying such methods as may be appropriate by adopting regulations in accordance with article 161, paragraph 8.

10. Upon the recommendation of the Council on the basis of advice from the Economic Planning Commission, the Assembly shall establish a system of compensation or take other measures of economic adjustment assistance including co-operation with specialised agencies and other international organisations to assist developing countries which suffer serious adverse effects on their export earnings or economies resulting from a reduction in the price of an affected mineral or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area. The Authority on request shall initiate studies on the problems of those States which are likely to be most seriously affected with a view to minimising their difficulties and assisting them in their economic adjustment.
Article 152
Exercise of powers and functions by the Authority

1. The Authority shall avoid discrimination in the exercise of its powers and functions, including the granting of opportunities for activities in the Area.

2. Nevertheless, special consideration for developing States, including particular consideration for the land-locked and geographically disadvantaged among them, specifically provided for in this Part shall be permitted.

Article 153
System of exploration and exploitation

1. Activities in the Area shall be organized, carried out and controlled by the Authority on behalf of mankind as a whole in accordance with this article as well as other relevant provisions of this Part and the relevant Annexes, and the rules, regulations and procedures of the Authority.

2. Activities in the Area shall be carried out as prescribed in paragraph 3:

(a) by the Enterprise, and

(b) in association with the Authority by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, when sponsored by such States, or any group of the foregoing which meets the requirements provided in this Part and in Annex III.

3. Activities in the Area shall be carried out in accordance with a formal written plan of work drawn up in accordance with Annex III and approved by the Council after review by the Legal and Technical Commission. In the case of activities in the Area carried out as authorized by the Authority by the entities specified in paragraph 2(b), the plan of work shall, in accordance with Annex III, article 3, be in the form of a contract. Such contracts may provide for joint arrangements in accordance with Annex III, article 11.

4. The Authority shall exercise such control over activities in the Area as is necessary for the purpose of securing compliance with the relevant provisions of this Part and the Annexes relating thereto, and the rules, regulations and procedures of the Authority, and the plans of work approved in accordance with paragraph 3. States Parties shall assist the Authority by taking all measures necessary to ensure such compliance in accordance with article 139.

5. The Authority shall have the right to take at any time any measures provided for under this Part to ensure compliance with its provisions and the exercise of the functions of control and regulation assigned to it thereunder or under any contract. The Authority shall have the right to inspect all installations in the Area used in connection with activities in the Area.

6. A contract under paragraph 3 shall provide for security of tenure. Accordingly, the contract shall not be revised, suspended or terminated except in accordance with Annex III, articles 18 and 19.

Article 154
Periodic review

Every five years from the entry into force of this Convention, the Assembly shall undertake a general and systematic review of the manner in which the international régime of the Area established in this Convention has operated in practice. In the light of this review the Assembly may take, or recommend that other organs take, measures in accordance with the provisions and procedures of this Part and the Annexes relating thereto which will lead to the improvement of the operation of the régime.

Article 155
The Review Conference

1. Fifteen years from 1 January of the year in which the earliest commercial production commences under an approved plan of work, the Assembly shall convene a conference for the review of those provisions of this Part and the relevant Annexes which govern the system of exploration and exploitation of the resources of the Area. The Review Conference shall consider in detail, in the light of the experience acquired during that period:

(a) whether the provisions of this Part which govern the system of exploration and exploitation of the resources of the Area have achieved their aims in all respects, including whether they have benefited mankind as a whole;

(b) whether, during the 15-year period, reserved areas have been exploited in an effective and balanced manner in comparison with non-reserved areas;

(c) whether the development and use of the Area and its resources have been undertaken in such a manner as to foster healthy development of the world economy and balanced growth of international trade;

(d) whether monopolization of activities in the Area has been prevented;

(e) whether the policies set forth in articles 150 and 151 have been fulfilled; and

(f) whether the system has resulted in the equitable sharing of benefits derived from activities in the Area, taking into particular consideration the interests and needs of the developing States.

2. The Review Conference shall ensure the maintenance of the principle of the common heritage of mankind, the international régime designed to ensure equitable exploitation of the resources of the Area for the benefit of all countries, especially the developing States, and an Authority to organize, conduct and control activities in the Area. It shall also ensure the maintenance of the principles laid down in this Part with regard to the exclusion of claims or exercise of sovereignty over any part of the Area, the rights of States and their general conduct in relation to the Area, and their participation in activities in the Area in conformity with this Convention, the prevention of monopolization of activities in the Area, the use of the Area exclusively for peaceful purposes, economic aspects of activities in the Area, marine scientific research, transfer of technology, protection of the marine environment, protection of human life, rights of coastal States, the
legal status of the waters superjacent to the Area and that of the air space above those waters and accommodation between activities in the Area and other activities in the marine environment.

3. The decision-making procedure applicable at the Review Conference shall be the same as that applicable at the Third United Nations Conference on the Law of the Sea. The Conference shall make every effort to reach agreement on any amendments by way of consensus and there should be no voting on such matters until all efforts at achieving consensus have been exhausted.

4. If, five years after its commencement, the Review Conference has not reached agreement on the system of exploration and exploitation of the resources of the Area, it may decide during the ensuing 12 months, by a three-fourths majority of the States Parties, to adopt and submit to the States Parties for ratification or accession such amendments changing or modifying the system as it determines necessary and appropriate. Such amendments shall enter into force for all States Parties 12 months after the deposit of instruments of ratification or accession by three-fourths of the States Parties.

5. Amendments adopted by the Review Conference pursuant to this article shall not affect rights acquired under existing contracts.

SECTION 4. THE AUTHORITY

SUBSECTION A. GENERAL PROVISIONS

Article 156
Establishment of the Authority

1. There are hereby established the International Sea-Bed Authority, which shall function in accordance with this Part.

2. All States Parties are ipso facto members of the Authority.

3. Observers at the Third United Nations Conference on the Law of the Sea who have signed the Final Act and who are not referred to in article 305, paragraph 1(c), (d), (e) or (f), shall have the right to participate in the Authority as observers, in accordance with its rules, regulations and procedures.

4. The seat of the Authority shall be in Jamaica.

5. The Authority may establish such regional centres or offices as it deems necessary for the exercise of its functions.

Article 157
Nature and fundamental principles of the Authority

1. The Authority is the organization through which States Parties shall, in accordance with this Part, organize and control activities in the Area, particularly with a view to administering the resources of the Area.

2. The powers and functions of the Authority shall be those expressly conferred upon it by this Convention. The Authority shall have such incidental powers, consistent with this Convention, as are implicit in and necessary for the exercise of those powers and functions with respect to activities in the Area.

3. The Authority is based on the principle of the sovereign equality of all its members.

4. All members of the Authority shall fulfil in good faith the obligations assumed by them in accordance with this Part in order to ensure to all of them the rights and benefits resulting from membership.

Article 158
Organs of the Authority

1. There are hereby established, as the principal organs of the Authority, an Assembly, a Council and a Secretariat.

2. There is hereby established the Enterprise, the organ through which the Authority shall carry out the functions referred to in article 170, paragraph 1.

3. Such subsidiary organs as may be found necessary may be established in accordance with this Part.

4. Each principal organ of the Authority and the Enterprise shall be responsible for exercising those powers and functions which are conferred upon it. In exercising such powers and functions each organ shall avoid taking any action which may derogate from or impede the exercise of specific powers and functions conferred upon another organ.

SUBSECTION B. THE ASSEMBLY

Article 159
Composition, procedure and voting

1. The Assembly shall consist of all the members of the Authority. Each member shall have one representative in the Assembly, who may be accompanied by alternates and advisers.

2. The Assembly shall meet in regular annual sessions and in such special sessions as may be decided by the Assembly, or convened by the Secretary-General at the request of the Council or of a majority of the members of the Authority.

3. Sessions shall take place at the seat of the Authority unless otherwise decided by the Assembly.

4. The Assembly shall adopt its rules of procedure. At the beginning of each regular session, it shall elect its President and such other officers as may be required. They shall hold office until a new President and other officers are elected at the next regular session.

5. A majority of the members of the Assembly shall constitute a quorum.

6. Each member of the Assembly shall have one vote.
7. Decisions on questions of procedure, including decisions to convene special sessions of the Assembly, shall be taken by a majority of the members present and voting.

8. Decisions on questions of substance shall be taken by a two-thirds majority of the members present and voting, provided that such majority includes a majority of the members participating in the session. When the issue arises as to whether a question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Assembly by the majority required for decisions on questions of substance.

9. When a question of substance comes up for voting for the first time, the President may, and shall, if requested by at least one fifth of the members of the Assembly, defer the issue of taking a vote on that question for a period not exceeding five calendar days. This rule may be applied only once to any question, and shall not be applied so as to defer the question beyond the end of the session.

10. Upon a written request addressed to the President and sponsored by at least one fourth of the members of the Authority for an advisory opinion on the conformity with this Convention of a proposal before the Assembly on any matter, the Assembly shall request the Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea to give an advisory opinion thereon and shall defer voting on that proposal pending receipt of the advisory opinion by the Chamber. If the advisory opinion is not received before the final week of the session in which it is requested, the Assembly shall decide when it will meet to vote upon the deferred proposal.

Article 160
Powers and Functions

1. The Assembly, as the sole organ of the Authority consisting of all the members, shall be considered the supreme organ of the Authority to which the other principal organs shall be accountable as specifically provided for in this Convention. The Assembly shall have the power to establish general policies in conformity with the relevant provisions of this Convention on any question or matter within the competence of the Authority.

2. In addition, the powers and functions of the Assembly shall be:

(a) to elect the members of the Council in accordance with article 161;
(b) to elect the Secretary-General from among the candidates proposed by the Council;
(c) to elect, upon the recommendation of the Council, the members of the Governing Board of the Enterprise and the Director-General of the Enterprise;
(d) to establish such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Part. In the composition of these subsidiary organs due account shall be taken of the principle of equitable geographical distribution and of special interests and the need for members qualified and competent in the relevant technical questions dealt with by such organs;
(e) to assess the contributions of members to the administrative budget of the Authority in accordance with an agreed scale of assessment based upon the scale used for the regular budget of the United Nations unless the Authority shall have sufficient income from other sources to meet its administrative expenses;
(f) (i) to consider and approve, upon the recommendation of the Council, the rules, regulations and procedures on the equitable sharing of financial and other economic benefits derived from activities in the Area and the payments and contributions made pursuant to article 82, taking into particular consideration the interests and needs of developing States and peoples who have not attained full independence or other self-governing status. If the Assembly does not approve the recommendations of the Council, the Assembly shall return them to the Council for reconsideration in the light of the views expressed by the Assembly;
(g) to consider and approve the rules, regulations and procedures of the Authority, and any amendments thereto, provisionally adopted by the Council pursuant to article 162, paragraph 2 (g) (ii). These rules, regulations and procedures shall relate to prospecting, exploration and exploitation in the Area, the financial management and internal administration of the Authority, and, upon the recommendation of the Governing Board of the Enterprise, to the transfer of funds from the Enterprise to the Authority;
(h) to decide upon the equitable sharing of financial and other economic benefits derived from activities in the Area, consistent with this Convention and the rules, regulations and procedures of the Authority;
(i) to consider and approve the proposed annual budget of the Authority submitted by the Council;
(j) to examine periodic reports from the Council and from the Enterprise and special reports requested from the Council or any other organ of the Authority;
(k) to initiate studies and make recommendations for the purpose of promoting international co-operation concerning activities in the Area and encouraging the progressive development of international law relating thereto and its codification;
(l) to consider problems of a general nature in connection with activities in the Area arising in particular for developing States, as well as those problems for States in connection with activities in the Area which are due to their geographical location, particularly for land-locked and geographically disadvantaged States;
(m) to establish, upon the recommendation of the Council, on the basis of advice from the Economic Planning Commission, a system of compensation or other measures of economic adjustment assistance as provided in article 151, paragraph 10;
(n) to suspend the exercise of rights and privileges of membership pursuant to article 185;
(n) to discuss any question or matter within the competence of the Authority and to decide as to which organ of the Authority shall deal with any such question or matter not specifically entrusted to a particular organ, consistent with the distribution of powers and functions among the organs of the Authority.

SUBSECTION C. THE COUNCIL

Article 161
Composition, procedure and voting

1. The Council shall consist of 36 members of the Authority elected by the Assembly in the following order:

(a) four members from among those States Parties which, during the last five years for which statistics are available, have either consumed more than 2 per cent of total world consumption or have had net imports of more than 2 per cent of total world imports of the commodities produced from the categories of minerals to be derived from the Area, and in any case one State from the Eastern European (Socialist) region, as well as the largest consumer;

(b) four members from among the eight States Parties which have the largest investments in preparation for and in the conduct of activities in the Area, either directly or through their nationals, including at least one State from the Eastern European (Socialist) region;

(c) four members from among States Parties which on the basis of production in areas under their jurisdiction are major net exporters of the categories of minerals to be derived from the Area, including at least two developing States whose exports of such minerals have a substantial bearing upon their economies;

(d) six members from among developing States Parties, representing special interests. The special interests to be represented shall include those of States with large populations, States which are land-locked or geographically disadvantaged, States which are major importers of the categories of minerals to be derived from the Area, States which are potential producers of such minerals, and least developed States;

(e) eighteen members elected according to the principle of ensuring an equitable geographical distribution of seats in the Council as a whole, provided that each geographical region shall have at least one member elected under this subparagraph. For this purpose, the geographical regions shall be Africa, Asia, Eastern European (Socialist), Latin America and Western European and Others.

2. In electing the members of the Council in accordance with paragraph 1, the Assembly shall ensure that:

(a) land-locked and geographically disadvantaged States are represented to a degree which is reasonably proportionate to their representation in the Assembly;

(b) coastal States, especially developing States, which do not qualify under paragraph 1(a), (b), (c) or (d) are represented to a degree which is reasonably proportionate to their representation in the Assembly;

(c) each group of States Parties to be represented on the Council is represented by those members, if any, which are nominated by that group.

3. Elections shall take place at regular sessions of the Assembly. Each member of the Council shall be elected for four years. At the first election, however, the term of one half of the members of each group referred to in paragraph 1 shall be two years.

4. Members of the Council shall be eligible for re-election, but due regard should be paid to the desirability of rotation of membership.

5. The Council shall function at the seat of the Authority, and shall meet as often as the business of the Authority may require, but not less than three times a year.

6. A majority of the members of the Council shall constitute a quorum.

7. Each member of the Council shall have one vote.

8. (a) Decisions on questions of procedure shall be taken by a majority of the members present and voting.

(b) Decisions on questions of substance arising under the following provisions shall be taken by a two-thirds majority of the members present and voting, provided that such majority includes a majority of the members of the Council; article 162, paragraph 2, subparagraphs (f), (g), (h), (i), (n), (p), (v); article 191.

(c) Decisions on questions of substance arising under the following provisions shall be taken by a three-fourths majority of the members present and voting, provided that such majority includes a majority of the members of the Council article 162, paragraph 1; article 162, paragraph 2, subparagraphs (a), (b), (c), (d), (e), (f), (g), (i), (j), (k), (m), (n), (o), (p); article 174, paragraph 3; Annex IV, article 11.

(d) Decisions on questions of substance arising under the following provisions shall be taken by consensus; article 162, paragraph 2(m) and (o); adoption of amendments to Part XI.

(e) For the purposes of subparagraphs (d), (f) and (g), "consensus" means the absence of any formal objection. Within 14 days of the submission of a proposal to the Council, the President of the Council shall determine whether there would be a formal objection to the adoption of the proposal. If the President determines that there would be such an objection, the President shall establish and convene, within three days following such determination, a conciliation committee consisting of not more than nine members of the Council, with the President as chairman, for
the purpose of reconciling the differences and producing a proposal which can be adopted by consensus. The committee shall work expeditiously and report to the Council within 14 days following its establishment. If the committee is unable to recommend a proposal which can be adopted by consensus, it shall set out in its report the grounds on which the proposal is being opposed.

Decisions on questions not listed above which the Council is authorized to take by the rules, regulations and procedures of the Authority or otherwise shall be taken pursuant to the subparagraphs of this paragraph specified in the rules, regulations and procedures or, if not specified therein, then pursuant to the subparagraph determined by the Council if possible in advance, by consensus.

When the issue arises as to whether a question is within subparagraph (a), (b), (c) or (d), the question shall be treated as being within the subparagraph requiring the higher or highest majority or consensus as the case may be, unless otherwise decided by the Council by the said majority or by consensus.

9. The Council shall establish a procedure whereby a member of the authority not represented on the Council may send a representative to attend a meeting of the Council when a request is made by such member, or a matter particularly affecting it is under consideration. Such a representative shall be entitled to participate in the deliberations but not to vote.

Article 162
Powers and functions

1. The Council is the executive organ of the Authority. The Council shall have the power to establish, in conformity with this Convention and the general policies established by the Assembly, the specific policies to be pursued by the Authority on any question or matter within the competence of the Authority.

2. In addition, the Council shall:

(a) supervise and co-ordinate the implementation of the provisions of this Part on all questions and matters within the competence of the Authority and invite the attention of the Assembly to cases of non-compliance;

(b) propose to the Assembly a list of candidates for the election of the Secretary-General;

(c) recommend to the Assembly candidates for the election of the members of the Governing Board of the Enterprise and the Director-General of the Enterprise;

(d) establish, as appropriate, and with due regard to economy and efficiency, such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Part. In the composition of subsidiary organs, emphasis shall be placed on the need for members qualified and competent in relevant technical matters dealt with by those organs provided that due account shall be taken of the principle of equitable geographical distribution and of special interests;

(e) adopt its rules of procedure including the method of selecting its president;

(f) enter into agreements with the United Nations or other international organizations on behalf of the Authority and within its competence, subject to approval by the Assembly;

(g) consider the reports of the Enterprise and transmit them to the Assembly with its recommendations;

(h) present to the Assembly annual reports and such special reports as the Assembly may request;

(i) issue directives to the Enterprise in accordance with article 170;

(j) approve plans of work in accordance with Annex III, article 6. The Council shall act upon each plan of work within 60 days of its submission by the Legal and Technical Commission at a session of the Council in accordance with the following procedures:

(i) if the Commission recommends the approval of a plan of work, it shall be deemed to have been approved by the Council if no member of the Council submits in writing to the President within 14 days a specific objection alleging non-compliance with the requirements of Annex III, article 6. If there is an objection, the conciliation procedure set forth in article 161, paragraph 8(e), shall apply. If, at the end of the conciliation procedure, the objection is still maintained, the plan of work shall be deemed to have been approved by the Council unless the Council disapproves it by consensus among its members excluding any State or States making the application or sponsoring the applicant;

(ii) if the Commission recommends the disapproval of a plan of work or does not make a recommendation, the Council may approve the plan of work by a three-fourths majority of the members present and voting, provided that such majority includes a majority of the members participating in the session;

(k) approve plans of work submitted by the Enterprise in accordance with Annex IV, article 12, mutatis mutandis, the procedures set forth in subparagraph (j);

(l) exercise control over activities in the Area in accordance with article 153, paragraph 4, and the rules, regulations and procedures of the Authority;

(m) take, upon the recommendation of the Economic Planning Commission, necessary and appropriate measures in accordance with article 150, subparagraph (h), to provide protection from the adverse economic effects specified therein;

(n) make recommendations to the Assembly, on the basis of advice from the Economic Planning Commission, for a system of compensation or other measures of economic adjustment assistance as provided in article 151, paragraph 10;
(o) recommend to the Assembly rules, regulations and procedures on the equitable sharing of financial and other economic benefits derived from activities in the Area and the payments and contributions made pursuant to article 82, taking into particular consideration the interests and needs of the developing States and peoples who have not attained full independence or other self-governing status;

(l) adopt and apply provisionally, pending approval by the Assembly, the rules, regulations and procedures of the Authority, and any amendments thereto, taking into account the recommendations of the Legal and Technical Commission or other subordinate organ concerned. These rules, regulations and procedures shall relate to prospecting, exploration and exploitation in the Area and the financial management and internal administration of the Authority. Priority shall be given to the adoption of rules, regulations and procedures for the exploration for and exploitation of polymetallic nodules. Rules, regulations and procedures for the exploration for and exploitation of any resource other than polymetallic nodules shall be adopted within three years from the date of a request to the Authority by any of its members to adopt such rules, regulations and procedures in respect of such resource. All rules, regulations and procedures shall remain in effect on a provisional basis until approved by the Assembly or until amended by the Council in the light of any views expressed by the Assembly;

(p) review the collection of all payments to be made by or to the Authority in connection with operations pursuant to this Part;

(q) make the selection from among applicants for production authorisations pursuant to Annex III, article 7, where such selection is required by that provision;

(c) submit the proposed annual budget of the Authority to the Assembly for its approval;

(s) make recommendations to the Assembly concerning policies on any question or matter within the competence of the Authority;

(t) make recommendations to the Assembly concerning suspension of the exercise of the rights and privileges of membership pursuant to article 185;

(u) institute proceedings on behalf of the Authority before the Sea-Bed Disputes Chamber in cases of non-compliance;

(v) notify the Assembly upon a decision by the Sea-Bed Disputes Chamber in proceedings instituted under subparagraph (u), and make any recommendations which it may find appropriate with respect to measures to be taken;

(w) issue emergency orders, which may include orders for the suspension or adjustment of operations, to prevent serious harm to the marine environment arising out of activities in the Area;

(x) disapprove areas for exploitation by contractors or the Enterprise in cases where substantial evidence indicates the risk of serious harm to the marine environment;

(y) establish a subsidiary organ for the elaboration of draft financial rules, regulations and procedures relating to:

(1) financial management in accordance with articles 171 to 175; and

(11) financial arrangements in accordance with Annex III, article 13 and article 17, paragraph 1(c);

(z) establish appropriate mechanisms for directing and supervising a staff of inspectors who shall inspect activities in the Area to determine whether this Part, the rules, regulations and procedures of the Authority, and the terms and conditions of any contract with the Authority are being complied with.

Article 163
Organs of the Council

1. There are hereby established the following organs of the Council:

(a) an Economic Planning Commission;

(b) a Legal and Technical Commission.

2. Each Commission shall be composed of 15 members, elected by the Council from among the candidates nominated by the States Parties. However, if necessary, the Council may decide to increase the size of any Commission having due regard to economy and efficiency.

3. Members of a Commission shall have appropriate qualifications in the area of competence of that Commission. States Parties shall nominate candidates of the highest standards of competence and integrity with qualifications in relevant fields so as to ensure the effective exercise of the functions of the Commissions.

4. In the election of members of the Commissions, due account shall be taken of the need for equitable geographical distribution and the representation of special interests.

5. No State Party may nominate more than one candidate for the same Commission. No person shall be elected to serve on more than one Commission.

6. Members of the Commissions shall hold office for a term of five years. They shall be eligible for re-election for a further term.

7. In the event of the death, incapacity or resignation of a member of a Commission prior to the expiration of the term of office, the Council shall elect for the remainder of the term a member from the same geographical region or area of interest.

8. Members of Commissions shall have no financial interest in any activity relating to exploration and exploitation in the Area. Subject to their responsibility to the Commissions upon which they serve, they shall not disclose, even after the termination of their functions, any industrial secret, proprietary data which are transferred to the Authority in accordance with Annex III, article 14, or any other confidential information coming to their knowledge by reason of their duties for the Authority.
9. Each Commission shall exercise its functions in accordance with such guidelines and directives as the Council may adopt.

10. Each Commission shall formulate and submit to the Council for approval such rules and regulations as may be necessary for the efficient conduct of the Commission's functions.

11. The decision-making procedures of the Commissions shall be established by the rules, regulations and procedures of the Authority. Recommendations to the Council shall, where necessary, be accompanied by a summary on the divergencies of opinion in the Commission.

12. Each Commission shall normally function at the seat of the Authority and shall meet as often as is required for the efficient exercise of its functions.

13. In the exercise of its functions, each Commission may, where appropriate, consult another commission, any competent organ of the United Nations or of its specialised agencies or any international organizations with competence in the subject-matter of such consultation.

Article 164
The Economic Planning Commission

1. Members of the Economic Planning Commission shall have appropriate qualifications such as those relevant to mining, management of mineral resources activities, international trade or international economics. The Council shall endeavour to ensure that the membership of the Commission reflects all appropriate qualifications. The list shall include at least two members from developing States whose exports of the categories of minerals to be derived from the Area have a substantial bearing upon their economies.

2. The Commission shall:

(a) propose, upon the request of the Council, measures to implement decisions relating to activities in the Area taken in accordance with this Convention;

(b) review the trends of and the factors affecting supply, demand and prices of minerals which may be derived from the Area, bearing in mind the interests of both importing and exporting countries, and in particular of the developing States among them;

(c) examine any situation likely to lead to the adverse effects referred to in article 150, subparagraph (b), brought to its attention by the State Party or States Parties concerned, and make appropriate recommendations to the Council;

(d) propose to the Council for submission to the Assembly, as provided in article 151, paragraph 10, a system of compensation or other measures of economic adjustment assistance for developing States which suffer adverse effects caused by activities in the Area. The Commission shall make the recommendations to the Council that are necessary for the application of the system or other measures adopted by the Assembly in specific cases.

1. Members of the Legal and Technical Commission shall have appropriate qualifications such as those relevant to exploration for and exploitation and processing of mineral resources, oceanology, protection of the marine environment, or economic or legal matters relating to ocean mining and related fields of expertise. The Council shall endeavour to ensure that the membership of the Commission reflects all appropriate qualifications.

2. The Commission shall:

(a) make recommendations with regard to the exercise of the Authority's functions upon the request of the Council;

(b) review formal written plans of work for activities in the Area in accordance with article 153, paragraph 3, and submit appropriate recommendations to the Council. The Commission shall base its recommendations solely on the grounds stated in Annex III and shall report fully thereon to the Council;

(c) supervise, upon the request of the Council, activities in the Area, where appropriate, in consultation and collaboration with any entity carrying out such activities or State or States concerned and report to the Council;

(d) prepare assessments of the environmental implications of activities in the Area;

(e) make recommendations to the Council on the protection of the marine environment, taking into account the views of recognized experts in that field;

(f) formulate and submit to the Council the rules, regulations and procedures referred to in article 162, paragraph (2)(o), taking into account all relevant factors including assessments of the environmental implications of activities in the Area;

(g) keep such rules, regulations and procedures under review and recommend to the Council from time to time such amendments thereto as it may deem necessary or desirable;

(h) make recommendations to the Council regarding the establishment of a monitoring programme to observe, measure, evaluate and analyse, by recognized scientific methods, on a regular basis, the risks or effects of pollution of the marine environment resulting from activities in the Area, ensure that existing regulations are adequate and are complied with and co-ordinate the implementation of the monitoring programme approved by the Council;

(i) recommend to the Council that proceedings be instituted on behalf of the Authority before the Sea-Bed Disputes Chamber, in accordance with this Part and the relevant Annexes taking into account particularly article 107;

(j) make recommendations to the Council with respect to measures to be taken, upon a decision by the Sea-Bed Disputes Chamber in proceedings instituted in accordance with subparagraph (i);
(h) make recommendations to the Council to issue emergency orders, which may include orders for the suspension or adjustment of operations, to prevent serious harm to the marine environment arising out of activities in the Area. Such recommendations shall be taken up by the Council on a priority basis;

(i) make recommendations to the Council to disapprove areas for exploitation by contractors or the Enterprise in cases where substantial evidence indicates the risk of serious harm to the marine environment;

(m) make recommendations to the Council regarding the direction and supervision of a staff of inspectors who shall inspect activities in the Area to determine whether the provisions of this Part, the rules, regulations and procedures of the Authority, and the terms and conditions of any contract with the Authority are being complied with;

(n) calculate the production ceiling and issue production authorisations on behalf of the Authority pursuant to article 151, paragraphs 2 to 7, following any necessary selection among applicants for production authorisations by the Council in accordance with Annex III, article 7.

3. The members of the Commission shall, upon request by any State Party or other party concerned, be accompanied by a representative of such State or other party concerned when carrying out their function of supervision and inspection.

**SUBSECTION D. THE SECRETARIAT**

**Article 166**

The Secretariat

1. The Secretariat of the Authority shall comprise a Secretary-General and such staff as the Authority may require.

2. The Secretary-General shall be elected for four years by the Assembly from among the candidates proposed by the Council and may be re-elected.

3. The Secretary-General shall be the chief administrative officer of the Authority, and shall act in that capacity in all meetings of the Assembly, of the Council and of any subsidiary organ, and shall perform such other administrative functions as are entrusted to the Secretary-General by those organs.

4. The Secretary-General shall make an annual report to the Assembly on the work of the Authority.

**Article 167**

The staff of the Authority

1. The staff of the Authority shall consist of such qualified scientific and technical and other personnel as may be required to fulfil the administrative functions of the Authority.

2. The paramount consideration in the recruitment and employment of the staff and in the determination of their conditions of service shall be the necessity of securing the highest standards of efficiency, competence and integrity. Subject to this consideration, due regard shall be paid to the importance of recruiting the staff on as wide a geographical basis as possible.

3. The staff shall be appointed by the Secretary-General. The terms and conditions on which they shall be appointed, remunerated and dismissed shall be in accordance with the rules, regulations and procedures of the Authority.

**Article 168**

International character of the Secretariat

1. In the performance of their duties the Secretary-General and the staff shall not seek or receive instructions from any government or from any other source external to the Authority. They shall refrain from any action which might reflect on their position as international officials responsible only to the Authority. Each State Party undertakes to respect the exclusively international character of the responsibilities of the Secretary-General and the staff and not to seek to influence them in the discharge of their responsibilities. Any violation of responsibilities by a staff member shall be submitted to the appropriate administrative tribunal as provided in the rules, regulations and procedures of the Authority.

2. The Secretary-General and the staff shall have no financial interest in any activity relating to exploration and exploitation in the Area. Subject to their responsibilities to the Authority, they shall not disclose, even after the termination of their functions, any industrial secret, proprietary data which are transferred to the Authority in accordance with Annex III, article 14, or any other confidential information coming to their knowledge by reason of their employment with the Authority.

3. Violations of the obligations of a staff member of the Authority set forth in paragraph 2 shall, on request of a State Party affected by such violation, or on a natural or juridical person, sponsored by a State Party as provided in article 153, paragraph 2(b), and affected by such violation, be submitted by the Authority against the staff member concerned to a tribunal designated by the rules, regulations and procedures of the Authority. The Party affected shall have the right to take part in the proceedings. If the tribunal so recommends, the Secretary-General shall dismiss the staff member concerned.

4. The rules, regulations and procedures of the Authority shall contain such provisions as are necessary to implement this article.

**Article 169**

Consultation and co-operation with international and non-governmental organisations

1. The Secretary-General shall, on matters within the competence of the Authority, make suitable arrangements, with the approval of the Council, for consultation and co-operation with international and non-governmental organizations recognized by the Economic and Social Council of the United Nations.
2. Any organization with which the Secretary-General has entered into an arrangement under paragraph 1 may designate representatives to attend meetings of the organs of the Authority as observers in accordance with the rules of procedure of these organs. Procedures shall be established for obtaining the views of such organizations in appropriate cases.

3. The Secretary-General may distribute to States Parties written reports submitted by the non-governmental organizations referred to in paragraph 1 on subjects in which they have special competence and which are related to the work of the Authority.

SUBSECTION E. THE ENTERPRISE

Article 170
The Enterprise

1. The Enterprise shall be the organ of the Authority which shall carry out activities in the Area directly, pursuant to article 153, paragraph 2(a), as well as the transporting, processing and marketing of minerals recovered from the Area.

2. The Enterprise shall, within the framework of the international legal personality of the Authority, have such legal capacity as is provided for in the Statute set forth in Annex IV. The Enterprise shall act in accordance with this Convention and the rules, regulations and procedures of the Authority, as well as the general policies established by the Assembly, and shall be subject to the directives and control of the Council.

3. The Enterprise shall have its principal place of business at the seat of the Authority.

4. The Enterprise shall, in accordance with article 173, paragraph 2, and Annex IV, article 11, be provided with such funds as it may require to carry out its functions, and shall receive technology as provided in article 144 and other relevant provisions of this Convention.

SUBSECTION F. FINANCIAL ARRANGEMENTS OF THE AUTHORITY

Article 171
Funds of the Authority

The funds of the Authority shall include:

(a) assessed contributions made by members of the Authority in accordance with article 160, paragraph 2(b);
(b) funds received by the Authority pursuant to Annex III, article 13, in connection with activities in the Area;
(c) funds transferred from the Enterprise in accordance with Annex IV, article 10;
(d) funds borrowed pursuant to article 174;
(e) voluntary contributions made by members or other entities; and
(f) payments to a compensation fund, in accordance with article 151, paragraph 10, whose sources are to be recommended by the Economic Planning Commission.

Article 172
Annual budget of the Authority

The Secretary-General shall draft the proposed annual budget of the Authority and submit it to the Council. The Council shall consider the proposed annual budget and submit it to the Assembly, together with any recommendations thereon. The Assembly shall consider and approve the proposed annual budget in accordance with article 160, paragraph 2(h).

Article 173
Expenses of the Authority

1. The contributions referred to in article 171, subparagraph (a), shall be paid into a special account to meet the administrative expenses of the Authority until the Authority has sufficient funds from other sources to meet those expenses.

2. The administrative expenses of the Authority shall be a first call upon the funds of the Authority. Except for the assessed contributions referred to in article 171, subparagraph (a), the funds which remain after payment of administrative expenses may, inter alia:

(a) be shared in accordance with article 140 and article 160, paragraph 2(g);
(b) be used to provide the Enterprise with funds in accordance with article 170, paragraph 4;
(c) be used to compensate developing States in accordance with article 151, paragraph 10, and article 160, paragraph 2(l).

Article 174
Borrowing power of the Authority

1. The Authority shall have the power to borrow funds.

2. The Assembly shall prescribe the limits on the borrowing power of the Authority in the financial regulations adopted pursuant to article 160, paragraph 2(f).

3. The Council shall exercise the borrowing power of the Authority.

4. States Parties shall not be liable for the debts of the Authority.

Article 175
Annual audit

The records, books and accounts of the Authority, including its annual financial statements, shall be audited annually by an independent auditor appointed by the Assembly.
SUBSECTION G. LEGAL STATUS, PRIVILEGES AND IMMUNITIES

Article 176
Legal Status

The Authority shall have international legal personality and such legal capacity as may be necessary for the exercise of its functions and the fulfillment of its purposes.

Article 177
Privileges and Immunities

To enable the Authority to exercise its functions, it shall enjoy in the territory of each State Party the privileges and immunities set forth in this subsection. The privileges and immunities relating to the Enterprise shall be those set forth in Annex IV, article 11.

Article 178
Immunity from legal process

The Authority, its property and assets, shall enjoy immunity from legal process except to the extent that the Authority expressly waives this immunity in a particular case.

Article 179
Immunity from search and any form of seizure

The property and assets of the Authority, wherever located and by whomsoever held, shall be immune from search, requisition, confiscation, expropriation or any other form of seizure by executive or legislative action.

Article 180
Exemption from restrictions, regulations, controls and moratoria

The property and assets of the Authority shall be exempt from restrictions, regulations, controls and moratoria of any nature.

Article 181
Archives and official communications of the Authority

1. The archives of the Authority, wherever located, shall be inviolable.

2. Proprietary data, industrial secrets or similar information and personnel records shall not be placed in archives which are open to public inspection.

3. With regard to its official communications, the Authority shall be accorded by each State Party treatment no less favourable than that accorded by that State to other international organizations.

Article 182
Privileges and immunities of certain persons connected with the Authority

Representatives of States Parties attending meetings of the Assembly, the Council or organs of the Assembly or the Council, and the Secretary-General and staff of the Authority, shall enjoy in the territory of each State Party:

(a) immunity from legal process with respect to acts performed by them in the exercise of their functions, except to the extent that the State which they represent or the Authority, as appropriate, expressly waives this immunity in a particular case;

(b) if they are not nationals of that State Party, the same exemptions from immigration restrictions, alien registration requirements and national service obligations, the same facilities as regards exchange restrictions and the same treatment in respect of travel facilities as are accorded by that State to the representatives, officials and employees of comparable rank of other States Parties.

Article 183
Exemption from taxes and customs duties

1. Within the scope of its official activities, the Authority, its assets and property, its income, and its operations and transactions, authorized by this Convention, shall be exempt from all direct taxation and goods imported or exported for its official use shall be exempt from all customs duties. The Authority shall not claim exemption from taxes which are no more than charges for services rendered.

2. When purchases of goods or services of substantial value necessary for the official activities of the Authority are made by or on behalf of the Authority, and when the price of such goods or services includes taxes or duties, appropriate measures shall, to the extent practicable, be taken by States Parties to grant exemption from such taxes or duties or provide for their reimbursement. Goods imported or purchased under an exemption provided for in this article shall not be sold or otherwise disposed of in the territory of the State Party which granted the exemption, except under conditions agreed with that State Party.

3. No tax shall be levied by States Parties on or in respect of salaries and emoluments paid or any other form of payment made by the Authority to the Secretary-General and staff of the Authority, as well as experts performing missions for the Authority, who are not their nationals.

SUBSECTION H. SUSPENSION OF THE EXERCISE OF RIGHTS AND PRIVILEGES OF MEMBERS

Article 184
Suspension of the exercise of voting rights

A State Party which is in arrears in the payment of its financial contributions to the Authority shall have no vote if the amount of its arrears equals or exceeds the amount of the contributions due from it for the preceding two full years. The Assembly may, nevertheless, permit such a member to vote if it is satisfied that the failure to pay is due to conditions beyond the control of the member.
Article 185
Suspension of exercise of rights
and privileges of membership

1. A State Party which has grossly and persistently violated the
provisions of this Part may be suspended from the exercise of the rights and
privileges of membership by the Assembly upon the recommendation of the
Council.

2. No action may be taken under paragraph 1 until the Sea-Bed Disputes
Chamber has found that a State Party has grossly and persistently violated the
provisions of this Part.

SECTION 5. SETTLEMENT OF DISPUTES AND ADVISORY OPINIONS

Article 186
Sea-Bed Disputes Chamber of the
International Tribunal for the Law of the Sea

The establishment of the Sea-Bed Disputes Chamber and the manner in
which it shall exercise its jurisdiction shall be governed by the provisions
of this section, of Part XV and of Annex VI.

Article 187
Jurisdiction of the Sea-Bed Disputes Chamber

The Sea-Bed Disputes Chamber shall have jurisdiction under this Part and
the Annexes relating thereto in disputes with respect to activities in the
Area falling within the following categories:

(a) disputes between States Parties concerning the interpretation or
application of this Part and the Annexes relating thereto;

(b) disputes between a State Party and the Authority concerning:
   (i) acts or omissions of the Authority or of a State Party alleged
to be in violation of this Part or the Annexes relating thereto
or of rules, regulations and procedures of the Authority
adopted in accordance therewith; or
   (ii) acts of the Authority alleged to be in excess of jurisdiction
or a misuse of power;

(c) disputes between parties to a contract, being States Parties, the
Authority or the Enterprise, state enterprises and natural or
juridical persons referred to in article 153, paragraph 2(b),
concerning:
   (i) the interpretation or application of a relevant contract or a
plan of work; or
   (ii) acts or omissions of a party to the contract relating to
activities in the Area and directed to the other party or
directly affecting its legitimate interests.

(d) disputes between the Authority and a prospective contractor who has
been sponsored by a State as provided in article 153, paragraph 2
(b), and has duly fulfilled the conditions referred to in Annex
III, article 4, paragraph 6, and article 13, paragraph 2,
concerning the refusal of a contract or a legal issue arising in
the negotiation of the contract;

(e) disputes between the Authority and a State Party, a state
enterprise or a natural or juridical person sponsored by a State
Party as provided for in article 153, paragraph 2(b), where it is
alleged that the Authority has incurred liability as provided in
Annex III, article 22;

(f) any other disputes for which the jurisdiction of the Chamber is
specifically provided in this Convention.

Article 188
Submission of disputes to a special chamber of the
International Tribunal for the Law of the Sea or an ad hoc
chamber of the Sea-Bed Disputes Chamber or to binding
commercial arbitration

1. Disputes between States Parties referred to in article 187,
subparagraph (a), may be submitted:

(a) at the request of the parties to the dispute, to a special chamber
of the International Tribunal for the Law of the Sea to be formed
in accordance with Annex VI, articles 15 and 17; or

(b) at the request of any party to the dispute, to an ad hoc chamber
of the Sea-Bed Disputes Chamber to be formed in accordance with
Annex VI, article 36.

2. (a) Disputes concerning the interpretation or application of a
contract referred to in article 187, subparagraph (c)(i), shall be
submitted, at the request of any party to the dispute, to binding
commercial arbitration, unless the parties otherwise agree. A
commercial arbitral tribunal to which the dispute is submitted
shall have no jurisdiction to decide any question of interpretation
of this Convention. When the dispute also involves a question of the
interpretation of Part XI and the Annexes relating thereto,
with respect to activities in the Area, that question shall be
referred to the Sea-Bed Disputes Chamber for a ruling.

(b) If, at the commencement of or in the course of such
arbitration, the arbitral tribunal determines, either at the
request of any party to the dispute or proprio motu, that its
decision depends upon a ruling of the Sea-Bed Disputes Chamber, the
arbitral tribunal shall refer such question to the Sea-Bed Disputes
Chamber for such ruling. The arbitral tribunal shall then proceed
to render its award in conformity with the ruling of the Sea-Bed
Disputes Chamber.

(c) In the absence of a provision in the contract on the
arbitration procedure to be applied in the dispute, the arbitration
shall be conducted in accordance with the UNCITRAL Arbitration
Rules1 or such other arbitration rules as may be prescribed in the
rules, regulations and procedures of the Authority, unless the
parties to the dispute otherwise agree.

chap V, sect C.
Article 189

Limitation on jurisdiction with regard to decisions of the Authority

The Sea-Bed Disputes Chamber shall have no jurisdiction with regard to the exercise by the Authority of its discretionary powers in accordance with this Part, in no case shall it substitute its discretion for that of the Authority. Without prejudice to article 191, in exercising its jurisdiction pursuant to article 187, the Sea-Bed Disputes Chamber shall not pronounce itself on the question of whether any rules, regulations and procedures of the Authority are in conformity with this Convention, nor declare invalid any such rules, regulations and procedures. Its jurisdiction in this regard shall be confined to deciding claims that the application of any rules, regulations and procedures of the Authority in individual cases would be in conflict with the contractual obligations of the parties to the dispute or their obligations under this Convention, claims concerning excess of jurisdiction or misuse of power, and to claims for damages to be paid or other remedy to be given to the party concerned for the failure of the other party to comply with its contractual obligations or its obligations under this Convention.

Article 190

Participation and appearance of sponsoring States Parties in proceedings

1. If a natural or juridical person is a party to a dispute referred to in article 187, the sponsoring State shall be given notice thereof and shall have the right to participate in the proceedings by submitting written or oral statements.

2. If an action is brought against a State Party by a natural or juridical person sponsored by another State Party in a dispute referred to in article 187, subparagraph (c), the respondent State may request the State sponsoring that person to appear in the proceedings on behalf of that person. Failing such appearance, the respondent State may arrange to be represented by a juridical person of its nationality.

Article 191

Advisory opinions

The Sea-Bed Disputes Chamber shall give advisory opinions at the request of the Assembly or the Council on legal questions arising within the scope of their activities. Such opinions shall be given as a matter of urgency.

PART XII

PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT

SECTION 1. GENERAL PROVISIONS

Article 192

General obligation

States have the obligation to protect and preserve the marine environment.

Article 193

Sovereign right of States to exploit their natural resources

States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

Article 194

Measures to prevent, reduce and control pollution of the marine environment

1. States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.

2. States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

3. The measures taken pursuant to this Part shall deal with all sources of pollution of the marine environment. These measures shall include, Inter alia, those designed to minimize to the fullest possible extent:

(a) the release of toxic, harmful or noxious substances, especially those which are persistent, from land-based sources, from or through the atmosphere or by dumping;

(b) pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels;

(c) pollution from installations and devices used in exploration or exploitation of the natural resources of the sea-bed and subsoil, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices;

(d) pollution from other installations and devices operating in the marine environment, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices.

4. In taking measures to prevent, reduce or control pollution of the marine environment, States shall refrain from unjustifiable interference with activities carried out by other States in the exercise of their rights and in pursuance of their duties in conformity with this Convention.
5. The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

Article 195
Duty not to transfer damage or hazards or transform one type of pollution into another

In taking measures to prevent, reduce and control pollution of the marine environment, States shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another.

Article 196
Use of technologies or introduction of alien or new species

1. States shall take all measures necessary to prevent, reduce and control pollution of the marine environment resulting from the use of technologies under their jurisdiction or control, or the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

2. This article does not affect the application of this Convention regarding the prevention, reduction and control of pollution of the marine environment.

SECTION 2. GLOBAL AND REGIONAL CO-OPERATION

Article 197
Co-operation on a global or regional basis

States shall co-operate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.

Article 198
Notification of imminent or actual damage

When a State becomes aware of cases in which the marine environment is in imminent danger of being damaged or has been damaged by pollution, it shall immediately notify other States it deems likely to be affected by such damage, as well as the competent international organizations.

Article 199
Contingency plans against pollution

In the cases referred to in article 198, States in the area affected, in accordance with their capabilities, and the competent international organizations shall co-operate, to the extent possible, in eliminating the effects of pollution and preventing or minimizing the damage. To this end, States shall jointly develop and promote contingency plans for responding to pollution incidents in the marine environment.

Article 200
Studies, research programmes and exchange of information and data

States shall co-operate, directly or through competent international organizations, in the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment. They shall endeavour to participate actively in regional and global programmes to acquire knowledge for the assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies.

Article 201
Scientific criteria for regulations

In the light of the information and data acquired pursuant to article 200, States shall co-operate, directly or through competent international organizations, in establishing appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment.

SECTION 3. TECHNICAL ASSISTANCE

Article 202
Scientific and technical assistance to developing States

States shall, directly or through competent international organizations:

(a) promote programmes of scientific, educational, technical and other assistance to developing States for the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution. Such assistance shall include, inter alia:

(i) training of their scientific and technical personnel;

(ii) facilitating their participation in relevant international programmes;

(iii) supplying them with necessary equipment and facilities;

(iv) enhancing their capacity to manufacture such equipment;

(v) advice on and developing facilities for research, monitoring, educational and other programmes;

(b) provide appropriate assistance, especially to developing States, for the minimization of the effects of major incidents which may cause serious pollution of the marine environment;

(c) provide appropriate assistance, especially to developing States, concerning the preparation of environmental assessments.
Article 203
Preferential treatment for developing States

Developing States shall, for the purposes of prevention, reduction and control of pollution of the marine environment or minimisation of its effects, be granted preference by international organisations in:

(a) the allocation of appropriate funds and technical assistance; and
(b) the utilisation of their specialised services.

SECTION 4. MONITORING AND ENVIRONMENTAL ASSESSMENT

Article 204
Monitoring of the risks or effects of pollution

1. States shall, consistent with the rights of other States, endeavour, as far as practicable, directly or through the competent international organisations, to observe, measure, evaluate and analyse, by recognised scientific methods, the risks or effects of pollution of the marine environment.

2. In particular, States shall keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.

Article 205
Publication of reports

States shall publish reports of the results obtained pursuant to article 204 or provide such reports at appropriate intervals to the competent international organisations, which should make them available to all States.

Article 206
Assessment of potential effects of activities

When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.

SECTION 5. INTERNATIONAL RULES AND NATIONAL LEGISLATION TO PREVENT, REDUCE AND CONTROL POLLUTION OF THE MARINE ENVIRONMENT

Article 207
Pollution from land-based sources

1. States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures.

2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.

3. States shall endeavour to harmonise their policies in this connection at the appropriate regional level.

4. States, acting especially through competent international organisations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

5. Laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 shall include those designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.

Article 208
Pollution from sea-bed activities subject to national jurisdiction

1. Coastal States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from or in connection with sea-bed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction, pursuant to articles 60 and 61.

2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.

3. Such laws, regulations and measures shall be no less effective than international rules, standards and recommended practices and procedures.

4. States shall endeavour to harmonise their policies in this connection at the appropriate regional level.

5. States, acting especially through competent international organisations or diplomatic conference, shall establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment referred to in paragraph 1. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

Article 209
Pollution from activities in the Area

1. International rules, regulations and procedures shall be established in accordance with Part XII to prevent, reduce and control pollution of the marine environment from activities in the Area. Such rules, regulations and procedures shall be re-examined from time to time as necessary.
2. Subject to the relevant provisions of this section, States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from activities in the Area undertaken by vessels, installations, structures and other devices flying their flag or of their registry or operating under their authority. The requirements of such laws and regulations shall be no less effective than the international rules, regulations and procedures referred to in paragraph 1.

Article 210
Pollution by dumping

1. States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment by dumping.

2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.

3. Such laws, regulations and measures shall ensure that dumping is not carried out without the permission of the competent authorities of States.

4. States, acting especially through competent international organisations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control such pollution. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

5. Dumping within the territorial sea and the exclusive economic zone or onto the continental shelf shall not be carried out without the prior approval of the coastal State, which has the right to permit, regulate and control such dumping after due consideration of the matter with other States which by reason of their geographical situation may be adversely affected thereby.

6. National laws, regulations and measures shall be no less effective in preventing, reducing and controlling such pollution than the global rules and standards.

Article 211
Pollution from vessels

1. States, acting through the competent international organisation or general diplomatic conference, shall establish international rules and standards to prevent, reduce and control pollution of the marine environment from vessels and promote the adoption, in the same manner, wherever appropriate, of routing systems designed to minimize the threat of accidents which might cause pollution of the marine environment, including the coastline, and pollution damage to the related interests of coastal States. Such rules and standards shall, in the same manner, be re-examined from time to time as necessary.

2. States shall adopt laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry. Such laws and regulations shall at least have the same effect as that of generally accepted international rules and standards established through the competent international organisation or general diplomatic conference.

3. States which establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition for the entry of foreign vessels into their ports or internal waters or for a call at their offshore terminals shall give due publicity to such entry requirements and shall communicate them to the competent international organization. Whenever such requirements are established in identical form by two or more coastal States in an endeavour to harmonize policy, the communication shall indicate which States are participating in such co-operative arrangements. Every State shall require the master of a vessel flying its flag or of its registry, when navigating within the territorial sea of a State participating in such co-operative arrangements, to furnish, upon the request of that State, information as to whether it complies with the port entry requirements of that State. This article is without prejudice to the continued exercise by a vessel of its right of innocent passage or to the application of article 25, paragraph 2.

4. Coastal States may, in the exercise of their sovereignty within their territorial sea, adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels, including vessels exercising the right of innocent passage. Such laws and regulations shall, in accordance with Part II, section 3, not hamper innocent passage of foreign vessels.

5. Coastal States, for the purpose of enforcement as provided for in section 6, may in respect of their exclusive economic zones adopt laws and regulations for the prevention, reduction and control of pollution from vessels conforming to and giving effect to generally accepted international rules and standards established through the competent international organization or general diplomatic conference.

6. (a) Where the international rules and standards referred to in paragraph 1 are inadequate to meet special circumstances and coastal States have reasonable grounds for believing that a particular, clearly defined area of their respective exclusive economic zones is an area where the adoption of special mandatory measures for the prevention of pollution from vessels is required for recognized technical reasons in relation to its oceanographical and ecological conditions, as well as its utilization or the protection of its resources and the particular character of its traffic, the coastal States, after appropriate consultations through the competent international organization with any other States concerned, may, for that area, direct a communication to that organization, submitting scientific and technical evidence in support of information on the situation and facilities. Within 12 months after receiving such a communication, the organization shall determine whether the conditions in that area correspond to the requirements set out above. If the organization so determines, the coastal States may, for that area, adopt laws and regulations for the prevention, reduction and control of pollution from vessels implementing such international rules and standards or navigational practices as are made applicable, through the organization, for special areas. These laws and regulations shall not become applicable to foreign vessels until 15 months after the submission of the communication to the organization.

(b) The coastal States shall publish the limits of any such particular, clearly defined area.
(c) If the coastal States intend to adopt additional laws and regulations for the same area for the prevention, reduction and control of pollution from vessels, they shall, when submitting the aforesaid communication, at the same time notify the organisation thereof. Such additional laws and regulations may relate to discharges or navigational practices but shall not require foreign vessels to observe design, construction, manning or equipment standards other than generally accepted international rules and standards; they shall become applicable to foreign vessels 15 months after the submission of the communication to the organisation, provided that the organisation agrees within 12 months after the submission of the communication.

7. The international rules and standards referred to in this article should include inter alia those relating to prompt notification to coastal States, whose coastline or related interests may be affected by incidents, including maritime casualties, which involve discharges or probability of discharges.

Article 212
Pollution from or through the atmosphere

1. States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from or through the atmosphere, applicable to the air space under their sovereignty and to vessels flying their flag or vessels or aircraft of their registry, taking into account internationally agreed rules, standards and recommended practices and procedures and the safety of air navigation.

2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.

3. States, acting especially through competent international organisations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control such pollution.

SECTION 6. ENFORCEMENT

Article 213
Enforcement with respect to pollution from land-based sources

States shall enforce their laws and regulations adopted in accordance with article 207 and shall adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organisations or diplomatic conference to prevent, reduce and control pollution of the marine environment from land-based sources.

Article 214
Enforcement with respect to pollution from sea-bad activities

States shall enforce their laws and regulations adopted in accordance with article 208 and shall adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organisations or diplomatic conference to prevent, reduce and control pollution of the marine environment arising from or in connection with sea-bed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction, pursuant to articles 60 and 80.

Article 215
Enforcement with respect to pollution from activities in the Area

Enforcement of international rules, regulations and procedures established in accordance with Part XI to prevent, reduce and control pollution of the marine environment from activities in the Area shall be governed by that Part.

Article 216
Enforcement with respect to pollution by dumping

1. Laws and regulations adopted in accordance with this Convention and applicable international rules and standards established through competent international organisations or diplomatic conference for the prevention, reduction and control of pollution of the marine environment by dumping shall be enforced:
   (a) by the coastal State with regard to dumping within its territorial sea or its exclusive economic zone or onto its continental shelf;
   (b) by the flag State with regard to vessels flying its flag or vessels or aircraft of its registry;
   (c) by any State with regard to acts of loading of wastes or other matter occurring within its territory or at its off-shore terminals.

2. No State shall be obliged by virtue of this article to institute proceedings when another State has already instituted proceedings in accordance with this article.

Article 217
Enforcement by Flag States

1. States shall ensure compliance by vessels flying their flag or of their registry with applicable international rules and standards, established through the competent international organisation or general diplomatic conference, and with their laws and regulations adopted in accordance with this Convention for the prevention, reduction and control of pollution of the marine environment from vessels and shall accordingly adopt laws and regulations and take other measures necessary for their implementation. Flag States shall provide for the effective enforcement of such rules, standards, laws and regulations, irrespective of where a violation occurs.
2. States shall, in particular, take appropriate measures in order to ensure that vessels flying their flag or of their registry are prohibited from sailing, until they can proceed to sea in compliance with the requirements of the international rules and standards referred to in paragraph 1, including requirements in respect of design, construction, equipment and manning of vessels.

3. States shall ensure that vessels flying their flag or of their registry carry on board certificates required by and issued pursuant to international rules and standards referred to in paragraph 1. States shall ensure that vessels flying their flag are periodically inspected in order to verify that such certificates, if applicable, are in conformity with the actual condition of the vessels. These certificates shall be accepted by other States as evidence of the condition of the vessels and shall be regarded as having the same force as certificates issued by them, unless there are clear grounds for believing that the condition of the vessel does not correspond substantially with the particulars of the certificates.

4. If a vessel commits a violation of rules and standards established through the competent international organization or general diplomatic conference, the flag State, without prejudice to articles 218, 220 and 228, shall provide for immediate investigation and where appropriate institute proceedings in respect of the alleged violation irrespective of where the violation occurred or where the pollution caused by such violation has occurred or has been spotted.

5. Flag States conducting an investigation of the violation may request the assistance of any other State whose co-operation could be useful in clarifying the circumstances of the case. States shall endeavour to meet appropriate requests of flag States.

6. States shall, at the written request of any State, investigate any violation alleged to have been committed by vessels flying their flag. If satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, flag States shall without delay institute such proceedings in accordance with their laws.

7. Flag States shall promptly inform the requesting State and the competent international organization of the action taken and its outcome. Such information shall be available to all States.

8. Penalties provided for by the laws and regulations of States for vessels flying their flag shall be adequate in severity to discourage violations wherever they occur.

Article 219
Measures relating to seaworthiness of vessels to avoid pollution

Subject to section 7, States which, upon request or on their own initiative, have ascertained that a vessel within one of their ports or at one of their off-shore terminals is in violation of applicable international rules and standards relating to seaworthiness of vessels and thereby threatens damage to the marine environment shall, as far as practicable, take administrative measures to prevent the vessel from sailing. Such States may permit the vessel to proceed only to the nearest appropriate repair yard and, upon removal of the causes of the violation, shall permit the vessel to continue immediately.

Article 220
Enforcement by coastal States

1. When a vessel is voluntarily within a port or at an off-shore terminal of a State, that State may undertake investigations and, where the evidence so warrants, institute proceedings in respect of any discharge in violation of its laws and regulations adopted in accordance with this Convention or applicable international rules and standards for the prevention, reduction and control of pollution from vessels when the violation has occurred within the territorial sea or the exclusive economic zone of that State.

2. Where there are clear grounds for believing that a vessel navigating in the territorial sea of a State has, during its passage therein, violated laws and regulations of that State adopted in accordance with this Convention or applicable international rules and standards for the prevention, reduction and control of pollution from vessels, that State, without prejudice to the application of the relevant provisions of Part II, section 3, may undertake physical inspection of the vessel relating to the violation and, where the evidence so warrants, institute proceedings, including detention of the vessel, in accordance with its laws, subject to the provisions of section 7.
3. Where there are clear grounds for believing that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation of applicable international rules and standards for the prevention, reduction, and control of pollution from vessels or laws and regulations of that State concerning and giving effect to such rules and standards, that State may require the vessel to give information regarding its identity and port of registry, its last and its next port of call, and other relevant information required to establish whether a violation has occurred.

4. States shall adopt laws and regulations and take other measures so that vessels flying their flag comply with requests for information pursuant to paragraph 3.

5. Where there are clear grounds for believing that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation referred to in paragraph 3 resulting in a substantial discharge causing or threatening significant pollution of the marine environment, that State may undertake physical inspection of the vessel for matters relating to the violation if the vessel has refused to give information or if the information supplied by the vessel is manifestly at variance with the evident factual situation and if the circumstances of the case justify such inspection.

6. Where there is clear objective evidence that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation referred to in paragraph 3 resulting in a discharge causing major damage or threat of major damage to the coastline or related interests of the coastal State, or to any resources of its territorial sea or exclusive economic zone, that State may, subject to section 7, provide that the evidence so warrants, institute proceedings, including detention of the vessel, in accordance with its laws.

7. Notwithstanding the provisions of paragraph 6, whenever appropriate procedures have been established, either through the competent international organization or as otherwise agreed, whereby compliance with requirements for bonding or other appropriate financial security has been assured, the coastal State if bound by such procedures shall allow the vessel to proceed.

8. The provisions of paragraphs 3, 4, 5, 6 and 7 also apply in respect of national laws and regulations adopted pursuant to article 211, paragraph 6.

Article 221

Measures to avoid pollution arising from maritime casualties

1. Nothing in this Part shall prejudice the right of States, pursuant to international law, both customary and conventional, to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protection of the coastal State or related interests, including fishing, from pollution or threat of pollution following upon a maritime casualty or acts relating to such a casualty, which may reasonably be expected to result in major harmful consequences.

2. For the purposes of this article, "maritime casualty" means a collision of vessels, stranding or other incident of navigation, or other occurrence on board a vessel or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo.
Article 226
Investigation of foreign vessels

1. (a) States shall not delay a foreign vessel longer than is essential for purposes of the investigations provided for in articles 216, 218 and 220. Any physical inspection of a foreign vessel shall be limited to an examination of such certificates, records or other documents as the vessel is required to carry by generally accepted international rules and standards or of any similar documents which it is carrying; further physical inspection of the vessel may be undertaken only after such an examination and only when:

(i) there are clear grounds for believing that the condition of the vessel or its equipment does not correspond substantially with the particulars of those documents;

(ii) the contents of such documents are not sufficient to confirm or verify a suspected violation or

(iii) the vessel is not carrying valid certificates and records.

(b) If the investigation indicates a violation of applicable laws and regulations or international rules and standards for the protection and preservation of the marine environment, release shall be made promptly subject to reasonable procedures such as bonding or other appropriate financial security.

(c) Without prejudice to applicable international rules and standards relating to the seaworthiness of vessels, the release of a vessel may, whenever it would present an unreasonable threat of damage to the marine environment, be refused or made conditional upon proceeding to the nearest appropriate repair yard. Where release has been refused or made conditional, the flag State of the vessel must be promptly notified, and may seek release of the vessel in accordance with Part XV.

2. States shall co-operate to develop procedures for the avoidance of unnecessary physical inspection of vessels at sea.

Article 227
Non-discrimination with respect to foreign vessels

In exercising their rights and performing their duties under this Part, States shall not discriminate in form or in fact against vessels of any other State.

Article 228
Suspension and restrictions on institution of proceedings

1. Proceedings to impose penalties in respect of any violation of applicable laws and regulations or international rules and standards relating to the prevention, reduction and control of pollution from vessels committed by a foreign vessel beyond the territorial sea of the State instituting proceedings shall be suspended upon the taking of proceedings to impose penalties in respect of corresponding charges by the flag State within six months of the date on which proceedings were first instituted, unless those proceedings relate to a case of major damage to the coastal State or the flag State in question has repeatedly disregarded its obligation to enforce effectively the applicable international rules and standards in respect of violations committed by its vessels. The flag State shall in due course make available to the State previously instituting proceedings a full dossier of the case and the records of the proceedings, whenever the flag State has requested the suspension of proceedings in accordance with this article. When proceedings instituted by the flag State have been brought to a conclusion, the suspended proceedings shall be terminated. Upon payment of costs incurred in respect of such proceedings, any bond posted or other financial security provided in connection with the suspended proceedings shall be released by the coastal State.

2. Proceedings to impose penalties on foreign vessels shall not be instituted after the expiry of three years from the date on which the violation was committed, and shall not be taken by any State in the event of having proceedings having been instituted by another State subject to the provisions set out in paragraph 1.

3. The provisions of this article are without prejudice to the right of the flag State to take any measures, including proceedings to impose penalties, according to its laws irrespective of prior proceedings by another State.

Article 229
Institution of civil proceedings

Nothing in this Convention affects the institution of civil proceedings in respect of any claim for loss or damage resulting from pollution of the marine environment.

Article 230
Monetary penalties and the observance of recognized rights of the accused

1. Monetary penalties only may be imposed with respect to violations of national laws and regulations or applicable international rules and standards for the prevention, reduction and control of pollution of the marine environment, committed by foreign vessels beyond the territorial sea.

2. Monetary penalties only may be imposed with respect to violations of national laws and regulations or applicable international rules and standards for the prevention, reduction and control of pollution of the marine environment, committed by foreign vessels in the territorial sea, except in the case of a wilful and serious act of pollution in the territorial sea.

3. In the conduct of proceedings in respect of such violations committed by a foreign vessel which may result in the imposition of penalties, recognized rights of the accused shall be observed.
**Article 231**

Notification to the flag State and other States concerned

States shall promptly notify the flag State and any other State concerned of any measures taken pursuant to section 6 against foreign vessels, and shall submit to the flag State all official reports concerning such measures. However, with respect to violations committed in the territorial seas, the foregoing obligations of the coastal State apply only to such measures as are taken in proceedings. The diplomatic agents or consular officers and where possible the maritime authority of the flag State, shall be immediately informed of any such measures taken pursuant to section 6 against foreign vessels.

**Article 232**

Liability of States arising from enforcement measures

States shall be liable for damage or loss attributable to them arising from measures taken pursuant to section 6 when such measures are unlawful or exceed those reasonably required in the light of available information. States shall provide for recourse in their courts for actions in respect of such damage or loss.

**Article 233**

Safeguards with respect to straits used for international navigation

Nothing in sections 5, 6 and 7 affects the legal régime of straits used for international navigation. However, if a foreign ship other than those referred to in section 10 has committed a violation of the laws and regulations referred to in article 42, paragraph 1(a) and (b), causing or threatening major damage to the marine environment of the straits, the States bordering the straits may take appropriate enforcement measures and if so shall respect mutatis mutandis the provisions of this section.

**SECTION 8. ICE-COVERED AREAS**

**Article 234**

Ice-covered areas

Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.

**SECTION 9. RESPONSIBILITY AND LIABILITY**

**Article 235**

Responsibility and liability

1. States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law.

2. States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.

3. With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall co-operate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

**SECTION 10. SOVEREIGN IMMUNITY**

**Article 236**

Sovereign immunity

The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention.

**SECTION 11. OBLIGATIONS UNDER OTHER CONVENTIONS ON THE PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT**

**Article 237**

Obligations under other conventions on the protection and preservation of the marine environment

1. The provisions of this Part are without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously which relate to the protection and preservation of the marine environment and to agreements which may be concluded in furtherance of the general principles set forth in this Convention.

2. Specific obligations assumed by States under special conventions, with respect to the protection and preservation of the marine environment, should be carried out in a manner consistent with the general principles and objectives of this Convention.
PART XIII
MARINE SCIENTIFIC RESEARCH

SECTION 1. GENERAL PROVISIONS

Article 238
Right to conduct marine scientific research

All States, irrespective of their geographical location, and competent international organizations have the right to conduct marine scientific research subject to the rights and duties of other States as provided for in this Convention.

Article 239
Promotion of marine scientific research

States and competent international organizations shall promote and facilitate the development and conduct of marine scientific research in accordance with this Convention.

Article 240
General principles for the conduct of marine scientific research

In the conduct of marine scientific research the following principles shall apply:

(a) marine scientific research shall be conducted exclusively for peaceful purposes;
(b) marine scientific research shall be conducted with appropriate scientific methods and means compatible with this Convention;
(c) marine scientific research shall not unjustifiably interfere with other legitimate uses of the sea compatible with this Convention and shall be duly respected in the course of such uses;
(d) marine scientific research shall be conducted in compliance with all relevant regulations adopted in conformity with this Convention including those for the protection and preservation of the marine environment.

Article 241
Non-recognition of marine scientific research activities as the legal basis for claims

Marine scientific research activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources.

SECTION 2. INTERNATIONAL CO-OPERATION

Article 242
Promotion of international co-operation

1. States and competent international organizations shall, in accordance with the principle of respect for sovereignty and jurisdiction and on the basis of mutual benefit, promote international co-operation in marine scientific research for peaceful purposes.

2. In this context, without prejudice to the rights and duties of States under this Convention, a State, in the application of this Part, shall provide, as appropriate, other States with a reasonable opportunity to obtain from it, or with its co-operation, information necessary to prevent and control damage to the health and safety of persons and to the marine environment.

Article 243
Creation of favourable conditions

States and competent international organizations shall co-operate, through the conclusion of bilateral and multilateral agreements, to create favourable conditions for the conduct of marine scientific research in the marine environment and to integrate the efforts of scientists in studying the essence of phenomena and processes occurring in the marine environment and the interrelations between them.

Article 244
Publication and dissemination of information and knowledge

1. States and competent international organizations shall, in accordance with this Convention, make available by publication and dissemination through appropriate channels information on proposed major programmes and their objectives as well as knowledge resulting from marine scientific research.

2. For this purpose, States, both individually and in co-operation with other States and with competent international organizations, shall actively promote the flow of scientific data and information and the transfer of knowledge resulting from marine scientific research, especially to developing States, as well as the strengthening of the autonomous marine scientific research capabilities of developing States through, inter alia, programmes to provide adequate education and training of their technical and scientific personnel.

SECTION 3. CONDUCT AND PROMOTION OF MARINE SCIENTIFIC RESEARCH

Article 245
Marine scientific research in the territorial sea

Coastal States, in the exercise of their sovereignty, have the exclusive right to regulate, authorise and conduct marine scientific research in their territorial sea. Marine scientific research therein shall be conducted only with the express consent of and under the conditions set forth by the coastal State.
Article 246
Marine scientific research in the exclusive economic zone and on the continental shelf

1. Coastal States, in the exercise of their jurisdiction, have the right to regulate, authorize and conduct marine scientific research in their exclusive economic zone and on their continental shelf in accordance with the relevant provisions of this Convention.

2. Marine scientific research in the exclusive economic zone and on the continental shelf shall be conducted with the consent of the coastal State.

3. Coastal States shall, in normal circumstances, grant their consent for marine scientific research projects by other States or competent international organizations in their exclusive economic zone or on their continental shelf to be carried out in accordance with this Convention exclusively for peaceful purposes and in order to increase scientific knowledge of the marine environment for the benefit of all mankind. To this end, coastal States shall establish rules and procedures ensuring that such consent will not be delayed or denied unreasonably.

4. For the purposes of applying paragraph 3, normal circumstances may exist in spite of the absence of diplomatic relations between the coastal State and the researching State.

5. Coastal States may however in their discretion withhold their consent to the conduct of a marine scientific research project of another State or competent international organization in the exclusive economic zone or on the continental shelf of the coastal State if that project:

(a) is of direct significance for the exploration and exploitation of natural resources, whether living or non-living;

(b) involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment;

(c) involves the construction, operation or use of artificial islands, installations and structures referred to in articles 60 and 80;

(d) contains information communicated pursuant to article 248 regarding the nature and objectives of the project which is inaccurate or if the researching State or competent international organization has outstanding obligations to the coastal State from a prior research project.

6. Notwithstanding the provisions of paragraph 5, coastal States may not exercise their discretion to withhold consent under subparagraph (a) of that paragraph in respect of marine scientific research projects to be undertaken in accordance with the provisions of this Part on the continental shelf, beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, outside those specific areas which coastal States may at any time publicly designate as areas in which exploitation or detailed exploratory operations focused on those areas are occurring or will occur within a reasonable period of time. Coastal States shall give reasonable notice of the designation of such areas, as well as any modifications thereto, but shall not be obliged to give details of the operations therein.

7. The provisions of paragraph 6 are without prejudice to the rights of coastal States over the continental shelf as established in article 77.

8. Marine scientific research activities referred to in this article shall not unjustifyably interfere with activities undertaken by coastal States in the exercise of their sovereign rights and jurisdiction provided for in this Convention.

Article 247
Marine scientific research projects undertaken by or under the auspices of international organizations

A coastal State which is a member of or has a bilateral agreement with an international organization, and in whose exclusive economic zone or on whose continental shelf that organization wants to carry out a marine scientific research project, directly or under its auspices, shall be deemed to have authorized the project to be carried out in conformity with the agreed specifications if that State approved the detailed project when the decision was made by the organization for the undertaking of the project, or is willing to participate in it, and has not expressed any objection within four months of notification of the project by the organization to the coastal State.

Article 248
Duty to provide information to the coastal State

States and competent international organizations which intend to undertake marine scientific research in the exclusive economic zone or on the continental shelf of a coastal State shall, not less than six months in advance of the expected starting date of the marine scientific research project, provide that State with a full description of:

(a) the nature and objectives of the project;

(b) the method and means to be used, including name, tonnage, type and class of vessels and a description of scientific equipment;

(c) the precise geographical areas in which the project is to be conducted;

(d) the expected date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate;

(e) the name of the sponsoring institution, its director, and the person in charge of the project; and

(f) the extent to which it is considered that the coastal State should be able to participate or to be represented in the project.

Article 249
Duty to comply with certain conditions

1. States and competent international organizations which undertaking marine scientific research in the exclusive economic zone or on the continental shelf of a coastal State shall comply with the following conditions
(a) ensure the right of the coastal State, if it so desires, to participate or be represented in the marine scientific research project, especially on board research vessels and other craft or scientific research installations, when practicable, without payment of any remuneration to the scientists of the coastal State and without obligation to contribute towards the costs of the project;

(b) provide the coastal State, at its request, with preliminary reports, as soon as practicable, and with the final results and conclusions after the completion of the research;

(c) undertake to provide access for the coastal State, at its request, to all data and samples derived from the marine scientific research project and likewise to furnish it with data which may be copied and samples which may be divided without detriment to their scientific value;

(d) if requested, provide the coastal State with an assessment of such data, samples and research results or provide assistance in their assessment or interpretation;

(e) ensure, subject to paragraph 2, that the research results are made internationally available through appropriate national or international channels, as soon as practicable;

(f) inform the coastal State immediately of any major change in the research programme;

(g) unless otherwise agreed, remove the scientific research installations or equipment once the research is completed.

2. This article is without prejudice to the conditions established by the laws and regulations of the coastal State for the exercise of its discretion to grant or withhold consent pursuant to article 246, paragraph 5, including requiring prior agreement for making internationally available the research results of a project of direct significance for the exploration and exploitation of natural resources.

Article 250
Communications concerning marine scientific research projects

Communications concerning the marine scientific research projects shall be made through appropriate official channels, unless otherwise agreed.

Article 251
General criteria and guidelines

States shall seek to promote through competent international organisations the establishment of general criteria and guidelines to assist States in ascertaining the nature and implications of marine scientific research.

Article 252
Implied consent

States or competent international organisations may proceed with a marine scientific research project six months after the data upon which the information required pursuant to article 248 was provided to the coastal State unless within four months of the receipt of the communication containing such information the coastal State has informed the State or organisation conducting the research that:

(a) it has withheld its consent under the provisions of article 246; or

(b) the information given by that State or competent international organisation regarding the nature or objectives of the project does not conform to the manifestly evident facts; or

(c) it requires supplementary information relevant to conditions and the information provided for under articles 248 and 249; or

(d) outstanding obligations exist with respect to a previous marine scientific research project carried out by that State or organisation, with regard to conditions established in article 249.

Article 253
Suspension or cessation of marine scientific research activities

1. A coastal State shall have the right to require the suspension of any marine scientific research activities in progress within its exclusive economic zone or on its continental shelf if:

(a) the research activities are not being conducted in accordance with the information communicated as provided under article 248 upon which the consent of the coastal State was based; or

(b) the State or competent international organisation conducting the research activities fails to comply with the provisions of article 249 concerning the rights of the coastal State with respect to the marine scientific research project.

2. A coastal State shall have the right to require the cessation of any marine scientific research activities in case of any non-compliance with the provisions of article 248 which amounts to a major change in the research project or the research activities.

3. A coastal State may also require cessation of marine scientific research activities if any of the situations contemplated in paragraph 1 are not rectified within a reasonable period of time.

4. Following notification by the coastal State of its decision to order suspension or cessation, States or competent international organisations authorised to conduct marine scientific research activities shall terminate the research activities that are the subject of such a notification.

5. An order of suspension under paragraph 1 shall be lifted by the coastal State and the marine scientific research activities allowed to continue once the researching State or competent international organisation has complied with the conditions required under articles 248 and 249.
Article 254

Rights of neighbouring land-locked and geographically disadvantaged States

1. States and competent international organizations which have submitted to a coastal State a project to undertake marine scientific research referred to in article 246, paragraph 3, shall give notice to the neighbouring land-locked and geographically disadvantaged States of the proposed research project, and shall notify the coastal State thereof.

2. After the consent has been given for the proposed marine scientific research project by the coastal State concerned, in accordance with article 246 and other relevant provisions of this Convention, States and competent international organizations undertaking such a project shall provide to the neighbouring land-locked and geographically disadvantaged States, at their request and when appropriate, relevant information as specified in article 248 and article 249, paragraph 1(f).

3. The neighbouring land-locked and geographically disadvantaged States referred to above shall, at their request, be given the opportunity to participate, whenever feasible, in the proposed marine scientific research project through qualified experts appointed by them and not objected to by the coastal State, in accordance with the conditions agreed for the project, in conformity with the provisions of this Convention, between the coastal State concerned and the State or competent international organizations conducting the marine scientific research.

4. States and competent international organizations referred to in paragraph 1 shall provide to the above-mentioned land-locked and geographically disadvantaged States, at their request, the information and assistance specified in article 249, paragraph 1(d), subject to the provisions of article 249, paragraph 2.

Article 255

Measures to facilitate marine scientific research and assist research vessels

States shall endeavour to adopt reasonable rules, regulations and procedures to promote and facilitate marine scientific research conducted in accordance with this Convention beyond their territorial sea and, as appropriate, to facilitate, subject to the provisions of their laws and regulations, access to their harbours and promote assistance for marine scientific research vessels which comply with the relevant provisions of this Part.

Article 256

Marine scientific research in the Area

All States, irrespective of their geographical location, and competent international organizations have the right, in conformity with the provisions of Part XI, to conduct marine scientific research in the Area.

Article 257

Marine scientific research in the water column beyond the exclusive economic zone

All States, irrespective of their geographical location, and competent international organizations have the right, in conformity with this Convention, to conduct marine scientific research in the water column beyond the limits of the exclusive economic zone.

SECTION 4. SCIENTIFIC RESEARCH INSTALLATIONS OR EQUIPMENT IN THE MARINE ENVIRONMENT

Article 258

Deployment and use

The deployment and use of any type of scientific research installations or equipment in any area of the marine environment shall be subject to the same conditions as are prescribed in this Convention for the conduct of marine scientific research in any such area.

Article 259

Legal status

The installations or equipment referred to in this section do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

Article 260

Safety zones

Safety zones of a reasonable breadth not exceeding a distance of 500 metres may be created around scientific research installations in accordance with the relevant provisions of this Convention. All States shall ensure that such safety zones are respected by their vessels.

Article 261

Non-interference with shipping routes

The deployment and use of any type of scientific research installations or equipment shall not constitute an obstacle to established international shipping routes.

Article 262

Identification markings and warning signals

Installations or equipment referred to in this section shall bear identification markings indicating the State of registry or the international organization to which they belong and shall have adequate internationally agreed warning signals to ensure safety at sea and the safety of air navigation, taking into account rules and standards established by competent international organizations.
SECTION 5. RESPONSIBILITY AND LIABILITY

Article 263
Responsibility and liability

1. States and competent international organizations shall be responsible for ensuring that marine scientific research, whether undertaken by them or on their behalf, is conducted in accordance with this Convention.

2. States and competent international organizations shall be responsible and liable for the measures they take in contravention of this Convention in respect of marine scientific research conducted by other States, their natural or juridical persons or by competent international organizations, and shall provide compensation for damage resulting from such measures.

3. States and competent international organizations shall be responsible and liable pursuant to article 235 for damage caused by pollution of the marine environment arising out of marine scientific research undertaken by them or on their behalf.

SECTION 6. SETTLEMENT OF DISPUTES AND INTERIM MEASURES

Article 264
Settlement of disputes

Disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled in accordance with Part XV, sections 2 and 3.

Article 265
Interim measures

Pending settlement of a dispute in accordance with Part XV, sections 2 and 3, the State or competent international organization authorised to conduct a marine scientific research project shall not allow research activities to commence or continue without the express consent of the coastal State concerned.

PART XIV
DEVELOPMENT AND TRANSFER OF MARINE TECHNOLOGY

SECTION 1. GENERAL PROVISIONS

Article 266
Promotion of the development and transfer of marine technology

1. States, directly or through competent international organizations, shall cooperate in accordance with their capabilities to promote actively the development and transfer of marine science and marine technology on fair and reasonable terms and conditions.

2. States shall promote the development of the marine scientific and technological capacity of States which may need and request technical assistance in this field, particularly developing States, including land-locked and geographically disadvantaged States, with regard to the exploration, exploitation, conservation and management of marine resources, the protection and preservation of the marine environment, marine scientific research and other activities in the marine environment compatible with this Convention, with a view to accelerating the social and economic development of the developing States.

3. States shall endeavour to foster favourable economic and legal conditions for the transfer of marine technology for the benefit of all parties concerned on an equitable basis.

Article 267
Protection of legitimate interests

States, in promoting co-operation pursuant to article 266, shall have due regard for all legitimate interests including, inter alia, the rights and duties of holders, suppliers and recipients of marine technology.

Article 268
Basic objectives

States, directly or through competent international organizations, shall promote:

(a) the acquisition, evaluation and dissemination of marine technological knowledge and facilitate access to such information and data;

(b) the development of appropriate marine technology;

(c) the development of the necessary technological infrastructure to facilitate the transfer of marine technology;

(d) the development of human resources through training and education of nationals of developing States and countries and especially the nationals of the least developed among them;

(e) international co-operation at all levels, particularly at the regional, subregional and bilateral levels.

Article 269
Measures to achieve the basic objectives

In order to achieve the objectives referred to in article 268, States, directly or through competent international organizations, shall endeavour, inter alia, to:

(a) establish programmes of technical co-operation for the effective transfer of all kinds of marine technology to States which may need and request technical assistance in this field, particularly the developing land-locked and geographically disadvantaged States, as well as other developing States which have not been able either to establish or develop their own technological capacity in marine science and in the exploration and exploitation of marine resources or to develop the infrastructure of such technology;
(b) promote favourable conditions for the conclusion of agreements, contracts and other similar arrangements, under equitable and reasonable conditions;

(c) hold conferences, seminars and symposia on scientific and technological subjects, in particular on policies and methods for the transfer of marine technology;

(d) promote the exchange of scientists and of technological and other experts;

(e) undertake projects and promote joint ventures and other forms of bilateral and multilateral co-operation.

SECTION 2. INTERNATIONAL CO-OPERATION

Article 270
Ways and means of international co-operation

International co-operation for the development and transfer of marine technology shall be carried out, where feasible and appropriate, through existing bilateral, regional or multilateral programmes, and also through expanded and new programmes in order to facilitate marine scientific research, the transfer of marine technology, particularly in new fields, and appropriate international funding for ocean research and development.

Article 271
Guidelines, criteria and standards

States, directly or through competent international organizations, shall promote the establishment of generally accepted guidelines, criteria and standards for the transfer of marine technology on a bilateral basis or within the framework of international organizations and other fora, taking into account, in particular, the interests and needs of developing States.

Article 272
Co-ordination of international programmes

In the field of transfer of marine technology, States shall endeavour to ensure that competent international organizations co-ordinate their activities, including any regional or global programmes, taking into account the interests and needs of developing States, particularly land-locked and geographically disadvantaged States.

Article 273
Co-operation with international organizations and the Authority

States shall co-operate actively with competent international organizations and the Authority to encourage and facilitate the transfer to developing States, their nationals and the Enterprise of skills and marine technology with regard to activities in the Area.

Article 274
Objectives of the Authority

Subject to all legitimate interests including, inter alia, the rights and duties of holders, suppliers and recipients of technology, the Authority, with regard to activities in the Area, shall ensure that:

(a) on the basis of the principle of equitable geographical distribution, nationals of developing States, whether coastal, land-locked or geographically disadvantaged, shall be taken on for the purposes of training as members of the managerial, research and technical staff constituted for its undertakings;

(b) the technical documentation on the relevant equipment, machinery, devices and processes is made available to all States, in particular developing States which may need and request technical assistance in this field;

(c) adequate provision is made by the Authority to facilitate the acquisition of technical assistance in the field of marine technology by States which may need and request it, in particular developing States, and the acquisition by their nationals of the necessary skills and know-how, including professional training;

(d) States which may need and request technical assistance in this field, in particular developing States, are assisted in the acquisition of necessary equipment, processes, plant and other technical know-how through any financial arrangements provided for in this Convention.

SECTION 3. NATIONAL AND REGIONAL MARINE SCIENTIFIC AND TECHNOCAL CENTRES

Article 275
Establishment of national centres

1. States, directly or through competent international organizations and the Authority, shall promote the establishment, particularly in developing coastal States, of national marine scientific and technological research centres and the strengthening of existing national centres, in order to stimulate and advance the conduct of marine scientific research by developing coastal States and to enhance their national capabilities to utilize and preserve their marine resources for their economic benefit.

2. States, through competent international organizations and the Authority, shall give adequate support to facilitate the establishment and strengthening of such national centres so as to provide for advanced training facilities and necessary equipment, skills and know-how as well as technical experts to such States which may need and request such assistance.

Article 276
Establishment of regional centres

1. States, in co-ordination with the competent international organizations, the Authority and national marine scientific and technological research institutions, shall promote the establishment of regional marine scientific and technological research centres, particularly in developing States, in order to stimulate and advance the conduct of marine scientific research by developing States and foster the transfer of marine technology.
2. All States of a region shall co-operate with the regional centres therein to ensure the more effective achievement of their objectives.

**Article 277
Functions of regional centres**

The functions of such regional centres shall include, *inter alia*:

(a) training and educational programmes at all levels on various aspects of marine scientific and technological research, particularly marine biology, including conservation and management of living resources, oceanography, hydrography, engineering, geological exploration of the sea-bed, mining and demelination technologies;

(b) management studies;

(c) study programmes related to the protection and preservation of the marine environment and the prevention, reduction and control of pollution;

(d) organization of regional conferences, seminars and symposia;

(e) acquisition and processing of marine scientific and technological data and information;

(f) prompt dissemination of results of marine scientific and technological research in readily available publications;

(g) publicizing national policies with regard to the transfer of marine technology and systematic comparative study of those policies;

(h) compilation and systematization of information on the marketing of technology and on contracts and other arrangements concerning patents;

(i) technical co-operation with other States of the region.

**SECTION 4. CO-OPERATION AMONG INTERNATIONAL ORGANIZATIONS**

**Article 278
Co-operation among international organizations**

The competent international organizations referred to in this Part and in Part XIII shall take all appropriate measures to ensure, either directly or in close co-operation among themselves, the effective discharge of their functions and responsibilities under this Part.

**PART XV
SETTLEMENT OF DISPUTES**

**SECTION 1. GENERAL PROVISIONS**

**Article 279
Obligation to settle disputes by peaceful means**

States Parties shall settle any dispute between them concerning the interpretation or application of this Convention by peaceful means in accordance with Article 2, paragraph 3, of the Charter of the United Nations and, to this end, shall seek a solution by the means indicated in Article 33, paragraph 1, of the Charter.

**Article 280
Settlement of disputes by any peaceful means chosen by the parties**

Nothing in this Part impairs the right of any States Parties to agree at any time to settle a dispute between them concerning the interpretation or application of this Convention by any peaceful means of their own choice.

**Article 281
Procedure where no settlement has been reached by the parties**

1. If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed to seek settlement of the dispute by a peaceful means of their own choice, the procedures provided for in this Part apply only where no settlement has been reached by recourse to such means and the agreement between the parties does not exclude any further procedure.

2. If the parties have also agreed on a time-limit, paragraph 1 applies only upon the expiration of that time-limit.

**Article 282
Obligations under general, regional or bilateral agreements**

If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed, through a general, regional or bilateral agreement or otherwise, that such dispute shall, at the request of any party to the dispute, be submitted to a procedure that entails a binding decision, that procedure shall apply in lieu of the procedures provided for in this Part, unless the parties to the dispute otherwise agree.

**Article 283
Obligation to exchange views**

1. When a dispute arises between States Parties concerning the interpretation or application of this Convention, the parties to the dispute shall proceed expeditiously to an exchange of views regarding its settlement by negotiation or other peaceful means.
2. The parties shall also proceed expeditiously to an exchange of views where a procedure for the settlement of such a dispute has been terminated without a settlement or where a settlement has been reached and the circumstances require consultation regarding the manner of implementing the settlement.

Article 284
Conciliation

1. A State Party which is a party to a dispute concerning the interpretation or application of this Convention may invite the other party or parties to submit the dispute to conciliation in accordance with the procedure under Annex V, section 1, or another conciliation procedure.

2. If the invitation is accepted and if the parties agree upon the conciliation procedure to be applied, any party may submit the dispute to that procedure.

3. If the invitation is not accepted or the parties do not agree upon the procedure, the conciliation proceedings shall be deemed to be terminated.

4. Unless the parties otherwise agree, when a dispute has been submitted to conciliation, the proceedings may be terminated only in accordance with the agreed conciliation procedure.

Article 285
Application of this section to disputes submitted pursuant to Part XI

This section applies to any dispute which pursuant to Part XI, section 5, is to be settled in accordance with procedures provided for in this Part. If an entity other than a State Party is a party to such a dispute, this section applies mutatis mutandis.

SECTION 2. COMPULSORY PROCEDURES ENTAILING BINDING DECISIONS

Article 286
Application of procedures under this section

Subject to section 3, any dispute concerning the interpretation or application of this Convention shall, where no settlement has been reached by recourse to section 1, be submitted at the request of any party to the dispute to the court or tribunal having jurisdiction under this section.

Article 287
Choice of procedure

1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State shall be free to choose, by means of a written declaration, one or more of the following means for the settlement of disputes concerning the interpretation or application of this Convention:

(a) the International Tribunal for the Law of the Sea established in accordance with Annex VI;

(b) the International Court of Justice;

(c) an arbitral tribunal constituted in accordance with Annex VII;

(d) a special arbitral tribunal constituted in accordance with Annex VIII for one or more of the categories of disputes specified therein.

2. A declaration made under paragraph 1 shall not affect or be affected by the obligation of a State Party to accept the jurisdiction of the Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea to the extent and in the manner provided for in Part XI, section 5.

3. A State Party, which is a party to a dispute not covered by a declaration in force, shall be deemed to have accepted arbitration in accordance with Annex VII.

4. If the parties to a dispute have accepted the same procedure for the settlement of the dispute, it may be submitted only to that procedure, unless the parties otherwise agree.

5. If the parties to a dispute have not accepted the same procedure for the settlement of the dispute, it may be submitted only to arbitration in accordance with Annex VII, unless the parties otherwise agree.

6. A declaration made under paragraph 1 shall remain in force until three months after notice of revocation has been deposited with the Secretary-General of the United Nations.

7. A new declaration, a notice of revocation or the expiry of a declaration does not in any way affect proceedings pending before a court or tribunal having jurisdiction under this article, unless the parties otherwise agree.

8. Declarations and notices referred to in this article shall be deposited with the Secretary-General of the United Nations, who shall transmit copies thereof to the States Parties.

Article 288
Jurisdiction

1. A court or tribunal referred to in article 287 shall have jurisdiction over any dispute concerning the interpretation or application of this Convention which is submitted to it in accordance with this Part.

2. A court or tribunal referred to in article 287 shall also have jurisdiction over any dispute concerning the interpretation or application of an international agreement related to the purposes of this Convention, which is submitted to it in accordance with the agreement.

3. The Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea established in accordance with Annex VI, and any other chamber or arbitral tribunal referred to in Part XI, section 5, shall have jurisdiction in any matter which is submitted to it in accordance therewith.

4. In the event of a dispute as to whether a court or tribunal has jurisdiction, the matter shall be settled by decision of that court or tribunal.
Article 289

Experts

In any dispute involving scientific or technical matters, a court or tribunal exercising jurisdiction under this section may, at the request of a party or proprio motu, select in consultation with the parties no fewer than two scientific or technical experts chosen preferably from the relevant list prepared in accordance with Annex VIII, article 2, to sit with the court or tribunal but without the right to vote.

Article 290

Provisional measures

1. If a dispute has been duly submitted to a court or tribunal which considers that prima facie it has jurisdiction under this Part or Part XI, section 5, the court or tribunal may prescribe any provisional measures which it considers appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending the final decision.

2. Provisional measures may be modified or revoked as soon as the circumstances justifying them have changed or ceased to exist.

3. Provisional measures may be prescribed, modified or revoked under this article only at the request of a party to the dispute and after the parties have been given an opportunity to be heard.

4. The court or tribunal shall forthwith give notice to the parties to the dispute, and to such other States Parties as it considers appropriate, of the prescription, modification or revocation of provisional measures.

5. Pending the constitution of an arbitral tribunal to which a dispute is being submitted under this section, any court or tribunal agreed upon by the parties or, failing such agreement within two weeks from the date of the request for provisional measures, the International Tribunal for the Law of the Sea or, with respect to activities in the Area, the Sea-Bed Disputes Chamber, may prescribe, modify or revoke provisional measures in accordance with this article if it considers that prima facie the tribunal which is to be constituted would have jurisdiction and that the urgency of the situation so requires. Once constituted, the tribunal to which the dispute has been submitted may modify, revoke or affirm those provisional measures, acting in conformity with paragraphs 1 to 4.

6. The parties to the dispute shall comply promptly with any provisional measures prescribed under this article.

Article 291

Access

1. All the dispute settlement procedures specified in this Part shall be open to States Parties.

2. The dispute settlement procedures specified in this Part shall be open to entities other than States Parties only as specifically provided for in this Convention.

Article 292

Prompt release of vessels and crews

1. Where the authorities of a State Party have detained a vessel flying the flag of another State Party and it is alleged that the detaining State has not complied with the provisions of this Convention for the prompt release of the vessel or its crew upon the posting of a reasonable bond or other financial security, the question of release from detention may be submitted to any court or tribunal agreed upon by the parties or, failing such agreement within 10 days from the time of detention, to a court or tribunal accepted by the detaining State under article 287 or to the International Tribunal for the Law of the Sea, unless the parties otherwise agree.

2. The application for release may be made only by or on behalf of the flag State of the vessel.

3. The court or tribunal shall deal without delay with the application for release and shall deal only with the question of release, without prejudice to the merits of any case before the appropriate domestic forum against the vessel, its owner or its crew. The authorities of the detaining State remain competent to release the vessel or its crew at any time.

4. Upon the posting of the bond or other financial security determined by the court or tribunal, the authorities of the detaining State shall comply promptly with the decision of the court or tribunal concerning the release of the vessel or its crew.

Article 293

Applicable law

1. A court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention.

2. Paragraph 1 does not prejudice the power of the court or tribunal having jurisdiction under this section to decide a case ex seque et bono, if the parties so agree.

Article 294

Preliminary proceedings

1. A court or tribunal provided for in article 287 to which an application is made in respect of a dispute referred to in article 297 shall determine at the request of a party, or may determine proprio motu, whether the claim constitutes an abuse of legal process or whether prima facie it is well founded. If the court or tribunal determines that the claim constitutes an abuse of legal process or is prima facie unfounded, it shall take no further action in the case.

2. Upon receipt of the application, the court or tribunal shall immediately notify the other party or parties of the application, and shall fix a reasonable time-limit within which they may request it to make a determination in accordance with paragraph 1.

3. Nothing in this article affects the right of any party to a dispute to make preliminary objections in accordance with the applicable rules of procedure.
Article 295

Exhaustion of local remedies

Any dispute between States Parties concerning the interpretation or application of this Convention may be submitted to the procedures provided for in this section only after local remedies have been exhausted where this is required by international law.

Article 296

Finality and binding force of decisions

1. Any decision rendered by a court or tribunal having jurisdiction under this section shall be final and shall be complied with by all the parties to the dispute.

2. Any such decision shall have no binding force except between the parties and in respect of that particular dispute.

SECTION 3. LIMITATIONS AND EXCEPTIONS TO APPLICABILITY OF SECTION 2

Article 297

Limitations on applicability of section 2

1. Disputes concerning the interpretation or application of this Convention with regard to the exercise by a coastal State of its sovereign rights or jurisdiction provided for in this Convention shall be subject to the procedures provided for in section 2 in the following cases:

(a) when it is alleged that a coastal State has acted in contravention of the provisions of this Convention in regard to the freedoms and rights of navigation, overflight or the laying of submarine cables and pipelines, or in regard to other internationally lawful uses of the sea specified in article 38;

(b) when it is alleged that a State in exercising the aforementioned freedoms, rights or uses has acted in contravention of this Convention or of laws or regulations adopted by the coastal State in conformity with this Convention and other rules of international law not incompatible with this Convention; or

(c) when it is alleged that a coastal State has acted in contravention of specified international rules and standards for the protection and preservation of the marine environment which are applicable to the coastal State and which have been established by this Convention or through a competent international organization or diplomatic conference in accordance with this Convention.

2. (a) Disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute arising out of:

(i) the exercise by the coastal State of a right or discretion in accordance with article 246; or

(ii) a decision by the coastal State to order suspension or cessation of a research project in accordance with article 253.

(b) A dispute arising from an allegation by the researching State that with respect to a specific project the coastal State is not exercising its rights under articles 246 and 253 in a manner compatible with this Convention shall be submitted, at the request of either party, to conciliation under Annex V, section 2, provided that the conciliation commission shall not call in question the exercise by the coastal State of its discretion to designate specific areas as referred to in article 246, paragraph 6, or of its discretion to withhold consent in accordance with article 246, paragraph 5.

3. (a) Disputes concerning the interpretation or application of the provisions of this Convention with regard to fisheries shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute relating to its sovereign rights with respect to the living resources in the exclusive economic zone or their exercise, including its discretionary powers for determining the allowable catch, its harvesting capacity, the allocation of surpluses to other States and the terms and conditions established in its conservation and management laws and regulations.

(b) Where no settlement has been reached by recourse to section 1 of this Part, a dispute shall be submitted to conciliation under Annex V, section 2, at the request of any party to the dispute, when it is alleged that:

(i) a coastal State has manifestly failed to comply with its obligations to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not seriously endangered;

(ii) a coastal State has arbitrarily refused to determine, at the request of another State, the allowable catch and its capacity to harvest living resources with respect to stocks which that other State is interested in fishing; or

(iii) a coastal State has arbitrarily refused to allocate to any State, under articles 62, 69 and 70 and under the terms and conditions established by the coastal State consistent with this Convention, the whole or part of the surplus it has declared to exist.

(c) In no case shall the conciliation commission substitute its discretion for that of the coastal State.

(d) The report of the conciliation commission shall be communicated to the appropriate international organizations.

(e) In negotiating agreements pursuant to articles 69 and 70, States Parties, unless they otherwise agree, shall include a clause on measures which they shall take in order to minimize the possibility of a disagreement concerning the interpretation or application of the agreement, and on how they should proceed if a disagreement nevertheless arises.
Article 298
Optional exceptions to applicability of section 2

1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State may, without prejudice to the obligations arising under section 1, declare in writing that it does not accept any one or more of the procedures provided for in section 2 with respect to one or more of the following categories of disputes:

(a) (i) disputes concerning the interpretation or application of articles 15, 74 and 83 relating to sea boundary delimitations, or those involving historic bays or titles, provided that a State having made such a declaration shall, when such a dispute arises subsequent to the entry into force of this Convention and where no agreement within a reasonable period of time is reached in negotiations between the parties, at the request of any party to the dispute, accept submission of the matter to conciliation under Annex V, section 2; and provided further that any dispute that necessarily involves the concurrent consideration of any unsettled dispute concerning sovereignty or other rights over continental or insular land territory shall be excluded from such submission;

(ii) after the conciliation commission has presented its report, which shall state the reasons on which it is based, the parties shall negotiate an agreement on the basis of that report; if these negotiations do not result in an agreement, the parties shall, by mutual consent, submit the question to one of the procedures provided for in section 2, unless the parties otherwise agree;

(iii) this subparagraph does not apply to any sea boundary dispute finally settled by an arrangement between the parties, or to any such dispute which is to be settled in accordance with a bilateral or multilateral agreement binding upon those parties;

(b) disputes concerning military activities, including military activities by government vessels and aircraft engaged in non-commercial service, and disputes concerning law enforcement activities in regard to the exercise of sovereignty or jurisdiction excluded from the jurisdiction of a court or tribunal under article 297, paragraph 2 or 3;

(c) disputes in respect of which the Security Council of the United Nations is exercising the functions assigned to it by the Charter of the United Nations, unless the Security Council decides to remove the matter from its agenda or calls upon the parties to settle it by the means provided for in this Convention.

2. A State Party which has made a declaration under paragraph 1 may at any time withdraw it, or agree to submit a dispute excluded by such declaration to any procedure specified in this Convention.

3. A State Party which has made a declaration under paragraph 1 shall not be entitled to submit any dispute falling within the excepted category of disputes to any procedure in this Convention as against another State Party, without the consent of that party.

4. If one of the States Parties has made a declaration under paragraph 1(a), any other State Party may submit any dispute falling within an excepted category against the declarant party to the procedure specified in such declaration.

5. A new declaration, or the withdrawal of a declaration, does not in any way affect proceedings pending before a court or tribunal in accordance with this article, unless the parties otherwise agree.

6. Declarations and notices of withdrawal of declarations under this article shall be deposited with the Secretary-General of the United Nations, who shall transmit copies thereof to the States Parties.

Article 299
Right of the parties to agree upon a procedure

1. A dispute excluded under article 297 or excepted by a declaration made under article 298 from the dispute settlement procedures provided for in section 2 may be submitted to such procedures only by agreement of the parties to the dispute.

2. Nothing in this section impairs the right of the parties to the dispute to agree to some other procedure for the settlement of such dispute or to reach an amicable settlement.

PART XVI
GENERAL PROVISIONS

Article 300
Good faith and abuse of rights

States Parties shall fulfill in good faith the obligations assumed under this Convention and shall exercise the rights, jurisdiction and freedoms recognised in this Convention in a manner which would not constitute an abuse of right.

Article 301
Peaceful uses of the seas

In exercising their rights and performing their duties under this Convention, States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the principles of international law embodied in the Charter of the United Nations.

Article 302
Disclosure of information

Without prejudice to the right of a State Party to resort to the procedures for the settlement of disputes provided for in this Convention, nothing in this Convention shall be deemed to require a State Party, in the fulfilment of its obligations under this Convention, to supply information the disclosure of which is contrary to the essential interests of its security.
Article 303
Archaeological and historical objects found at sea

1. States have the duty to protect objects of an archaeological and historical nature found at sea and shall co-operate for this purpose.

2. In order to control traffic in such objects, the coastal State may, in applying article 33, presume that their removal from the sea-bed in the zone referred to in that article without its approval would result in an infringement within its territory or territorial sea of the laws and regulations referred to in that article.

3. Nothing in this article affects the rights of identifiable owners, the law of salvage or other rules of admiralty, or laws and practices with respect to cultural exchanges.

4. This article is without prejudice to other international agreements and rules of international law regarding the protection of objects of an archaeological and historical nature.

Article 304
Responsibility and liability for damage

The provisions of this Convention regarding responsibility and liability for damage are without prejudice to the application of existing rules and the development of further rules regarding responsibility and liability under international law.

PART XVII
FINAL PROVISIONS

Article 305
Signature

1. This Convention shall be open for signature by:

(a) all States;

(b) Namibia, represented by the United Nations Council for Namibia;

(c) all self-governing associated States which have chosen that status in an act of self-determination supervised and approved by the United Nations in accordance with General Assembly resolution 1514 (XV) and which have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(d) all self-governing associated States which, in accordance with their respective instruments of association, have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(e) all territories which enjoy full internal self-government, recognised as such by the United Nations, but have not attained full independence in accordance with General Assembly resolution 1514 (XV) and which have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(f) international organisations, in accordance with Annex IX.

2. This Convention shall remain open for signature until 9 December 1984 at the Ministry of Foreign Affairs of Jamaica and also, from 1 July 1983 until 9 December 1984, at United Nations Headquarters in New York.

Article 306
Ratification and formal confirmation

This Convention is subject to ratification by States and the other entities referred to in article 305, paragraph 1(b), (c), (d) and (e), and to formal confirmation, in accordance with Annex IX, by the entities referred to in article 305, paragraph 1(f). The instruments of ratification and of formal confirmation shall be deposited with the Secretary-General of the United Nations.

Article 307
Accession

This Convention shall remain open for accession by States and the other entities referred to in article 305. Accession by the entities referred to in article 305, paragraph 1(f), shall be in accordance with Annex IX. The instruments of accession shall be deposited with the Secretary-General of the United Nations.

Article 308
Entry into force

1. This Convention shall enter into force 12 months after the date of deposit of the sixtieth instrument of ratification or accession.

2. For each State ratifying or acceding to this Convention after the deposit of the sixtieth instrument of ratification or accession, the Convention shall enter into force on the thirtieth day following the deposit of its instrument of ratification or accession, subject to paragraph 1.

3. The Assembly of the Authority shall meet on the date of entry into force of this Convention and shall elect the Council of the Authority. The first Council shall be constituted in a manner consistent with the purpose of article 161 if the provisions of that article cannot be strictly applied.

4. The rules, regulations and procedures drafted by the Preparatory Commission shall apply provisionally pending their formal adoption by the Authority in accordance with Part XI.

5. The Authority and its organs shall act in accordance with resolution II of the Third United Nations Conference on the Law of the Sea relating to preparatory investment and with decisions of the Preparatory Commission taken pursuant to that resolution.
Article 309

Reservations and exceptions

No reservations or exceptions may be made to this Convention unless expressly permitted by other articles of this Convention.

Article 310

Declarations and statements

Article 309 does not preclude a State, when signing, ratifying or acceding to this Convention, from making declarations or statements, however phrased or named, with a view, inter alia, to the harmonisation of its laws and regulations with the provisions of this Convention, provided that such declarations or statements do not purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State.

Article 311

Relation to other conventions and international agreements

1. This Convention shall prevail, as between States Parties, over the Geneva Conventions on the Law of the Sea of 29 April 1958.

2. This Convention shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

3. Two or more States Parties may conclude agreements modifying or suspending the operation of provisions of this Convention, applicable solely to the relations between them, provided that such agreements do not relate to a provision derogation from which is incompatible with the effective execution of the object and purpose of this Convention, and provided further that such agreements shall not affect the application of the basic principles embodied herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

4. States Parties intending to conclude an agreement referred to in paragraph 3 shall notify the other States Parties through the depositary of this Convention of their intention to conclude the agreement and of the modification or suspension for which it provides.

5. This article does not affect international agreements expressly permitted or preserved by other articles of this Convention.

6. States Parties agree that there shall be no amendments to the basic principle relating to the common heritage of mankind set forth in article 136 and that they shall not be party to any agreement in derogation thereof.

Article 312

Amendment

1. After the expiry of a period of 10 years from the date of entry into force of this Convention, a State Party may, by written communication addressed to the Secretary-General of the United Nations, propose specific amendments to this Convention, other than those relating to activities in the Area, and request the convening of a conference to consider such proposed amendments. The Secretary-General shall circulate such communication to all States Parties. If, within 12 months from the date of the circulation of the communication, not less than one half of the States Parties reply favourably to the request, the Secretary-General shall convene the conference.

2. The decision-making procedure applicable at the amendment conference shall be the same as that applicable at the Third United Nations Conference on the Law of the Sea unless otherwise decided by the conference. The conference should make every effort to reach agreement on any amendments by way of consensus and there should be no voting on them until all efforts at consensus have been exhausted.

Article 313

Amendment by simplified procedure

1. A State Party may, by written communication addressed to the Secretary-General of the United Nations, propose an amendment to this Convention, other than an amendment relating to activities in the Area, to be adopted by the simplified procedure set forth in this article without convening a conference. The Secretary-General shall circulate the communication to all States Parties.

2. If, within a period of 12 months from the date of the circulation of the communication, a State Party objects to the proposed amendment or to the proposal for its adoption by the simplified procedure, the amendment shall be considered rejected. The Secretary-General shall immediately notify all States Parties accordingly.

3. If, 12 months from the date of the circulation of the communication, no State Party has objected to the proposed amendment or to the proposal for its adoption by the simplified procedure, the proposed amendment shall be considered adopted. The Secretary-General shall notify all States Parties that the proposed amendment has been adopted.

Article 314

Amendments to the provisions of this Convention relating exclusively to activities in the Area

1. A State Party may, by written communication addressed to the Secretary-General of the Authority, propose an amendment to the provisions of this Convention relating exclusively to activities in the Area, including Annex VI, section 4. The Secretary-General shall circulate such communication to all States Parties. The proposed amendment shall be subject to approval by the Assembly following its approval by the Council. Representatives of States Parties in those organs shall have full powers to consider and approve the proposed amendment. The proposed amendment as approved by the Council and the Assembly shall be considered adopted.
2. Before approving any amendment under paragraph 1, the Council and the Assembly shall ensure that it does not prejudice the system of exploration for and exploitation of the resources of the Area, pending the Review Conference in accordance with article 155.

**Article 315**

**Signature, ratification of, accession to and authentic texts of amendments**

1. Once adopted, amendments to this Convention shall be open for signature by States Parties for 12 months from the date of adoption, at United Nations Headquarters in New York, unless otherwise provided in the amendment itself.

2. Articles 306, 307 and 320 apply to all amendments to this Convention.

**Article 316**

**Entry into force of amendments**

1. Amendments to this Convention, other than those referred to in paragraph 5, shall enter into force for the States Parties ratifying or acceding to them on the thirtieth day following the deposit of instruments of ratification or accession by two thirds of the States Parties or by 60 States Parties, whichever is greater. Such amendments shall not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

2. An amendment may provide that a larger number of ratifications or accessions shall be required for its entry into force than are required by this article.

3. For each State Party ratifying or acceding to an amendment referred to in paragraph 1 after the deposit of the required number of instruments of ratification or accession, the amendment shall enter into force on the thirtieth day following the deposit of its instrument of ratification or accession.

4. A State which becomes a Party to this Convention after the entry into force of an amendment in accordance with paragraph 1 shall, failing an expression of a different intention by that State:
   (a) be considered as a Party to this Convention as so amended; and
   (b) be considered as a Party to the unamended Convention in relation to any State Party not bound by the amendment.

5. Any amendment relating exclusively to activities in the Area and any amendment to Annex VI shall enter into force for all States Parties one year following the deposit of instruments of ratification or accession by three fourths of the States Parties.

6. A State which becomes a Party to this Convention after the entry into force of amendments in accordance with paragraph 5 shall be considered as a Party to this Convention as so amended.
(iii) texts of amendments referred to in paragraph 2(d), for their information.

(b) The Secretary-General shall also invite those observers to participate as observers at meetings of States Parties referred to in paragraph 2(e).

Article 320
Authentic texts

The original of this Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall, subject to article 305, paragraph 2, be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF, the undersigned Plenipotentiaries, being duly authorized thereto, have signed this Convention.

DONE AT MONTEGO BAY, this tenth day of December, one thousand nine hundred and eighty-two.

[For the signatures, see volume 1835, p. 4.]
ANNEX II. COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF

Article 1

In accordance with the provisions of article 76, a Commission on the limits of the Continental Shelf beyond 200 nautical miles shall be established in conformity with the following articles.

Article 2

1. The Commission shall consist of 21 members who shall be experts in the field of geology, geophysics or hydrography, elected by States Parties to this Convention from among their nationals, having due regard to the need to ensure equitable geographical representation, who shall serve in their personal capacities.

2. The initial election shall be held as soon as possible but in any case within 18 months after the date of entry into force of this Convention. At least three months before the date of each election, the Secretary-General of the United Nations shall address a letter to the States Parties inviting the submission of nominations, after appropriate regional consultations, within three months. The Secretary-General shall prepare a list in alphabetical order of all persons thus nominated and shall submit it to all the States Parties.

3. Elections of the members of the Commission shall be held at a meeting of States Parties convened by the Secretary-General at United Nations Headquarters. At that meeting, for which two thirds of the States Parties shall constitute a quorum, the persons elected to the Commission shall be those nominees who obtain a two-thirds majority of the votes of the representatives of States Parties present and voting. Not less than three members shall be elected from each geographical region.

4. The members of the Commission shall be elected for a term of five years. They shall be eligible for re-election.

5. The State Party which submitted the nomination of a member of the Commission shall defray the expenses of that member while in performance of Commission duties. The coastal State concerned shall defray the expenses incurred in respect of the advice referred to in article 3, paragraph 1(b), of this Annex. The secretariat of the Commission shall be provided by the Secretary-General of the United Nations.

Article 3

1. The functions of the Commission shall be:

(a) to provide scientific and technical advice, if requested by the coastal State concerned during the preparation of the data referred to in subparagraph (a).

2. The Commission may co-operate, to the extent considered necessary and useful, with the Intergovernmental Oceanographic Commission of UNESCO, the International Hydrographic Organization and other competent international organizations with a view to exchanging scientific and technical information which might be of assistance in discharging the Commission’s responsibilities.

Article 4

Where a coastal State intends to establish, in accordance with article 76, the outer limits of its continental shelf beyond 200 nautical miles, it shall submit particulars of such limits to the Commission along with supporting scientific and technical data as soon as possible but in any case within 10 years of the entry into force of this Convention for that State. The coastal State shall at the same time give the names of any Commission members who have provided it with scientific and technical advice.

Article 5

Unless the Commission decides otherwise, the Commission shall function by way of sub-commissions composed of seven members, appointed in a balanced manner taking into account the specific elements of each submission by a coastal State. Nationals of the coastal State making the submission who are members of the Commission and any Commission member who has assisted a coastal State by providing scientific and technical advice with respect to the delineation shall not be a member of the sub-commission dealing with that submission but has the right to participate as a member in the proceedings of the Commission concerning the said submission. The coastal State which has made a submission to the Commission may send its representatives to participate in the relevant proceedings without the right to vote.

Article 6

1. The sub-commission shall submit its recommendations to the Commission.

2. Approval by the Commission of the recommendations of the sub-commission shall be by a majority of two thirds of Commission members present and voting.

3. The recommendations of the Commission shall be submitted in writing to the coastal State which made the submission and to the Secretary-General of the United Nations.

Article 7

Coastal States shall establish the outer limits of the continental shelf in conformity with the provisions of article 76, paragraph 8, and in accordance with the appropriate national procedures.

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1 See vol. 1835, p. 291.
Article 8
In the case of disagreement by the coastal State with the recommendations of the Commission, the coastal State shall, within a reasonable time, make a revised or new submission to the Commission.

Article 9
The actions of the Commission shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts.

ANNEX III. BASIC CONDITIONS OF PROSPECTING, EXPLORATION AND EXPLOITATION

Article 1
Title to minerals

Title to minerals shall pass upon recovery in accordance with this Convention.

Article 2
Prospecting

1. (a) The Authority shall encourage prospecting in the Area.

   (b) Prospecting shall be conducted only after the Authority has received a satisfactory written undertaking that the proposed prospector will comply with this Convention and the relevant rules, regulations and procedures of the Authority concerning co-operation in the training programmes referred to in articles 143 and 144 and the protection of the marine environment, and will accept verification by the Authority of compliance therewith. The proposed prospector shall, at the same time, notify the Authority of the approximate area or areas in which prospecting is to be conducted.

   (c) Prospecting may be conducted simultaneously by more than one prospector in the same area or areas.

2. Prospecting shall not confer on the prospector any rights with respect to resources. A prospector may, however, recover a reasonable quantity of minerals to be used for testing.

Article 3
Exploration and exploitation

1. The Enterprise, States Parties, and the other entities referred to in article 153, paragraph 2(b), may apply to the Authority for approval of plans of work for activities in the Area.

2. The Enterprise may apply with respect to any part of the Area, but applications by others with respect to reserved areas are subject to the additional requirements of article 9 of this Annex.

3. Exploration and exploitation shall be carried out only in areas specified in plans of work referred to in article 153, paragraph 3, and approved by the Authority in accordance with this Convention and the relevant rules, regulations and procedures of the Authority.

4. Every approved plan of work shall:

   (a) be in conformity with this Convention and the rules, regulations and procedures of the Authority;

   (b) provide for control by the Authority of activities in the Area in accordance with article 153, paragraph 4;
(c) confer on the operator, in accordance with the rules, regulations and procedures of the Authority, the exclusive right to explore for and exploit the specified categories of resources in the area covered by the plan of work. If, however, the applicant presents for approval a plan of work covering only the stage of exploration or the stage of exploitation, the approved plan of work shall confer such exclusive right with respect to that stage only.

5. Upon its approval by the Authority, every plan of work, except those presented by the Enterprise, shall be in the form of a contract concluded between the Authority and the applicant or applicants.

Article 4
Qualifications of applicants

1. Applicants, other than the Enterprise, shall be qualified if they have the nationality or control and sponsorship required by article 153, paragraph 2(b), and if they follow the procedures and meet the qualification standards set forth in the rules, regulations and procedures of the Authority.

2. Except as provided in paragraph 6, such qualification standards shall relate to the financial and technical capabilities of the applicant and his performance under any previous contracts with the Authority.

3. Each applicant shall be sponsored by the State Party of which it is a national unless the applicant has more than one nationality, as in the case of a partnership or consortium of entities from several States, in which event all States Parties involved shall sponsor the application, or unless the applicant is effectively controlled by another State Party or its nationals, in which event both States Parties shall sponsor the application. The criteria and procedures for implementation of the sponsorship requirements shall be set forth in the rules, regulations and procedures of the Authority.

4. The sponsoring State or States shall, pursuant to article 139, have the responsibility to ensure, within their legal systems, that a contractor so sponsored shall carry out activities in the Area in conformity with the terms of its contract and its obligations under this Convention. A sponsoring State shall not, however, be liable for damage caused by any failure of a contractor sponsored by it to comply with its obligations if that State Party has adopted laws and regulations and taken administrative measures which are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction.

5. The procedures for assessing the qualifications of States Parties which are applicants shall take into account their character as States.

6. The qualification standards shall require that every applicant, without exception, shall as part of his application undertake:

(a) to accept as enforceable and comply with the applicable obligations created by the provisions of Part XI, the rules, regulations and procedures of the Authority, the decisions of the organs of the Authority and terms of his contracts with the Authority;

(b) to accept control by the Authority of activities in the Area, as authorized by this Convention;

(c) to provide the Authority with a written assurance that his obligations under the contract will be fulfilled in good faith;

(d) to comply with the provisions on the transfer of technology set forth in article 5 of this Annex.

Article 5
Transfer of technology

1. When submitting a plan of work, every applicant shall make available to the Authority a general description of the equipment and methods to be used in carrying out activities in the Area, and other relevant non-proprietary information about the characteristics of such technology and information as to where such technology is available.

2. Every operator shall inform the Authority of revisions in the description and information made available pursuant to paragraph 1 whenever a substantial technological change or innovation is introduced.

3. Every contract for carrying out activities in the Area shall contain the following undertakings by the contractor:

(a) to make available to the Enterprise on fair and reasonable commercial terms and conditions, whenever the Authority so requests, the technology which he uses in carrying out activities in the Area under the contract, which the contractor is legally entitled to transfer. This shall be done by means of licences or other appropriate arrangements which the contractor shall negotiate with the Enterprise and which shall be set forth in a specific agreement supplementary to the contract. This undertaking may be invoked only if the Enterprise finds that it is unable to obtain the same or equally efficient and useful technology on the open market on fair and reasonable commercial terms and conditions;

(b) to obtain a written assurance from the owner of any technology used in carrying out activities in the Area under the contract, which is not generally available on the open market and which is not covered by subparagraph (a), that the owner will, whenever the Authority so requests, make that technology available to the Enterprise under licence or other appropriate arrangements and on fair and reasonable commercial terms and conditions, to the same extent as made available to the contractor. If this assurance is not obtained, the technology in question shall not be used by the contractor in carrying out activities in the Area;

(c) to acquire from the owner by means of an enforceable contract, upon the request of the Enterprise and if it is possible to do so without substantial cost to the contractor, the legal right to transfer to the Enterprise any technology used by the contractor, in carrying out activities in the Area under the contract, which the contractor is otherwise not legally entitled to transfer and which is not generally available on the open market. In cases where there is a substantial corporate relationship between the contractor and the owner of the technology, the closeness of this relationship and the degree of control or influence shall be relevant to the determination whether all feasible measures have been taken to acquire such a right. In cases where the contractor exercises effective control over the owner, failure to acquire from the owner the legal right shall be considered relevant to the contractor's qualification for any subsequent application for approval of a plan of work.
Article 6
Approval of plans of work

1. Six months after the entry into force of this Convention, and thereafter each fourth month, the Authority shall take up for consideration proposed plans of work.

2. When considering an application for approval of a plan of work in the form of a contract, the Authority shall first ascertain whether:

(a) the applicant has complied with the procedures established for applications in accordance with article 4 of this Annex and has given the Authority the undertakings and assurances required by that article. In cases of non-compliance with these procedures or in the absence of any of these undertakings and assurances, the applicant shall be given 45 days to remedy these defects;

(b) the applicant possesses the requisite qualifications provided for in article 4 of this Annex.

3. All proposed plans of work shall be taken up in the order in which they are received. The proposed plans of work shall comply with and be governed by the relevant provisions of this Convention and the rules, regulations and procedures of the Authority, including those on operational requirements, financial contributions and the undertakings concerning the transfer of technology. If the proposed plans of work conform to these requirements, the Authority shall approve them provided that they are in accordance with the uniform and non-discriminatory requirements set forth in the rules, regulations and procedures of the Authority, unless:

(a) part or all of the area covered by the proposed plan of work is included in an approved plan of work or a previously submitted proposed plan of work which has not yet been finally acted on by the Authority;

(b) part or all of the area covered by the proposed plan of work is disapproved by the Authority pursuant to article 162, paragraph 2 (x); or

(c) the proposed plan of work has been submitted or sponsored by a State Party which already holds:

(i) plans of work for exploration and exploitation of polymetallic nodules in non-reserved areas that, together with either part of the area covered by the application for a plan of work, exceed in size 30 per cent of a circular area of 400,000 square kilometres surrounding the centre of either part of the area covered by the proposed plan of work;

(14) plans of work for the exploration and exploitation of polymetallic nodules in non-reserved areas which, taken together, constitute 2 per cent of the total sea-bed area which is not reserved or disapproved for exploitation pursuant to article 162, paragraph (2)(x).
4. For the purpose of the standard set forth in paragraph 3(c), a plan of work submitted by a partnership or consortium shall be counted on a pro rata basis among the sponsoring States Parties involved in accordance with article 4, paragraph 3, of this Annex. The Authority may approve plans of work covered by paragraph 3(c) if it determines that such approval would not permit a State Party or entities sponsored by it to monopolize the conduct of activities in the Area or to preclude other States Parties from activities in the Area.

5. Notwithstanding paragraph 3(a), after the end of the interim period specified in article 151, paragraph 3, the Authority may adopt by means of rules, regulations and procedures other procedures and criteria consistent with this Convention for deciding which applicants shall have plans of work approved in cases of selection among applicants for a proposed area. These procedures and criteria shall ensure approval of plans of work on an equitable and non-discriminatory basis.

**Article 7**

**Selection among applicants for production authorizations**

1. Six months after the entry into force of this Convention, and thereafter each fourth month, the Authority shall take up for consideration applications for production authorizations submitted during the immediately preceding period. The Authority shall issue the authorizations applied for if all such applications can be approved without exceeding the production limitation or contravening the obligations of the Authority under a commodity agreement or arrangement to which it has become a party, as provided in article 151.

2. When a selection must be made among applicants for production authorizations because of the production limitation set forth in article 151, paragraphs 2 to 7, or because of the obligations of the Authority under a commodity agreement or arrangement to which it has become a party, as provided for in article 151, paragraph 1, the Authority shall make the selection on the basis of objective and non-discriminatory standards set forth in its rules, regulations and procedures.

3. In the application of paragraph 2, the Authority shall give priority to those applicants which:

   (a) give better assurance of performance, taking into account their financial and technical qualifications and their performance, if any, under previously approved plans of work;

   (b) provide earlier prospective financial benefits to the Authority, taking into account when commercial production is scheduled to begin;

   (c) have already invested the most resources and effort in prospecting or exploration.

4. Applicants which are not selected in any period shall have priority in subsequent periods until they receive a production authorization.

5. Selection shall be made taking into account the need to enhance opportunities for all States Parties, irrespective of their social and economic systems or geographical locations so as to avoid discrimination against any State or system, to participate in activities in the Area and to prevent monopolization of those activities.

6. Whenever fewer reserved areas than non-reserved areas are under exploitation, applications for production authorizations with respect to reserved areas shall have priority.

7. The decisions referred to in this article shall be taken as soon as possible after the close of each period.

**Article 8**

**Reservation of areas**

Each application, other than those submitted by the Enterprise or by any other entities for reserved areas, shall cover a total area, which need not be a single continuous area, sufficiently large and of sufficient estimated commercial value to allow two mining operations. The applicant shall indicate the co-ordinates dividing the area into two parts of equal estimated commercial value and submit all the data obtained by him with respect to both parts. Without prejudice to the powers of the Authority pursuant to article 17 of this Annex, the data to be submitted concerning polymetallic nodules shall relate to mapping, sampling, the abundance of nodules, and their metal content. Within 45 days of receiving such data, the Authority shall designate which part is to be reserved solely for the conduct of activities by the Authority through the Enterprise or in association with developing States. This designation may be deferred for a further period of 45 days if the Authority requests an independent expert to assess whether all data required by this article has been submitted. The area designated shall become a reserved area as soon as the plan of work for the non-reserved area is approved and the contract is signed.

**Article 9**

**Activities in reserved areas**

1. The Enterprise shall be given an opportunity to decide whether it intends to carry out activities in each reserved area. This decision may be taken at any time, unless a notification pursuant to paragraph 4 is received by the Authority, in which event the Enterprise shall take its decision within a reasonable time. The Enterprise may decide to exploit such areas in joint ventures with the interested State or entity.

2. The Enterprise may conclude contracts for the execution of part of its activities in accordance with Annex IV, article 12. It may also enter into joint ventures for the conduct of such activities with any entities which are eligible to carry out activities in the Area pursuant to article 153, paragraph 2(b). When considering such joint ventures, the Enterprise shall offer to States Parties which are developing States and their nationals the opportunity of effective participation.

3. The Authority may prescribe, in its rules, regulations and procedures substantive and procedural requirements and conditions with respect to such contracts and joint ventures.

4. Any State Party which is a developing State or any natural or juridical person sponsored by it and effectively controlled by it or by other developing State which is a qualified applicant, or any group of the foregoing, may notify the Authority that it wishes to submit a plan of work pursuant to article 6 of this Annex with respect to a reserved area. The plan of work shall be considered if the Enterprise decides, pursuant to paragraph 1, that it does not intend to carry out activities in that area.
Article 10
Preference and priority among applicants

An operator who has an approved plan of work for exploration only, as provided in article 3, paragraph 4(c), of this Annex shall have a preference and a priority among applicants for a plan of work covering exploitation of the same area and resources. However, such preference or priority may be withdrawn if the operator's performance has not been satisfactory.

Article 11
Joint arrangements

1. Contracts may provide for joint arrangements between the contractor and the Authority through the Enterprise, in the form of joint ventures or production sharing, as well as any other form of joint arrangement, which shall have the same protection against revision, suspension or termination as contracts with the Authority.

2. Contractors entering into such joint arrangements with the Enterprise may receive financial incentives as provided for in article 13 of this Annex.

3. Partners in joint ventures with the Enterprise shall be liable for the payments required by article 13 of this Annex to the extent of their share in the joint ventures, subject to financial incentives as provided for in that article.

Article 12
Activities carried out by the Enterprise

1. Activities in the Area carried out by the Enterprise pursuant to article 153, paragraph 2(a), shall be governed by Part XI, the rules, regulations and procedures of the Authority and its relevant decisions.

2. Any plan of work submitted by the Enterprise shall be accompanied by evidence supporting its financial and technical capabilities.

Article 13
Financial terms of contracts

1. In adopting rules, regulations and procedures concerning the financial terms of a contract between the Authority and the entities referred to in article 153, paragraph 2(b), and in negotiating those financial terms in accordance with Part XI and those rules, regulations and procedures, the Authority shall be guided by the following objectives:

(a) to ensure optimum revenues for the Authority from the proceeds of commercial production;

(b) to attract investments and technology to the exploration and exploitation of the Area;

(c) to ensure equality of financial treatment and comparable financial obligations for contractors;

(d) to provide incentives on a uniform and non-discriminatory basis for contractors to undertake joint arrangements with the Enterprise and developing States or their nationals, to stimulate the transfer of technology thereto, and to train the personnel of the Authority and of developing States;

(e) to enable the Enterprise to engage in sea-bed mining effectively at the same time as the entities referred to in article 153, paragraph 2(b) and

(f) to ensure that, as a result of the financial incentives provided to contractors under paragraph 14, under the terms of contracts reviewed in accordance with article 19 of this Annex or under the provisions of article 11 of this Annex with respect to joint ventures, contractors are not subsidised so as to be given an artificial competitive advantage with respect to land-based miners.

2. A fee shall be levied for the administrative cost of processing an application for approval of a plan of work in the form of a contract and shall be fixed at an amount of $US 500,000 per application. The amount of the fee shall be reviewed from time to time by the Council in order to ensure that it covers the administrative cost incurred. If such administrative cost incurred by the Authority in processing an application is less than the fixed amount, the Authority shall refund the difference to the applicant.

3. A contractor shall pay an annual fixed fee of $US 1 million from the date of entry into force of the contract. If the approved date of commencement of commercial production is postponed because of a delay in issuing the production authorisation, in accordance with article 151, the annual fixed fee shall be waived for the period of postponement. From the date of commencement of commercial production, the contractor shall pay either the production charge or the annual fixed fee, whichever is greater.

4. Within a year of the date of commencement of commercial production, in conformity with paragraph 3, a contractor shall choose to make his financial contribution to the Authority by either:

(a) paying a production charge only; or

(b) paying a combination of a production charge and a share of net proceeds.

5. (a) If a contractor chooses to make his financial contribution to the Authority by paying a production charge only, it shall be fixed at a percentage of the market value of the processed metals produced from the polymetallic nodules extracted from the area covered by the contract. This percentage shall be fixed as follows:

(i) years 1-10 of commercial production 5 per cent

(ii) years 11 to the end of commercial production 12 per cent

(b) The said market value shall be the product of the quantity of the processed metals produced from the polymetallic nodules extracted from the area covered by the contract area the average price for those metals during the relevant accounting year, as defined in paragraphs 7 and 8.
6. If a contractor chooses to make his financial contribution to the Authority by paying a combination of a production charge and a share of net proceeds, such payments shall be determined as follows:

(a) The production charge shall be fixed at a percentage of the market value, determined in accordance with subparagraph (b), of the processed metals produced from the polymetallic nodules recovered from the area covered by the contract. This percentage shall be fixed as follows:

(i) first period of commercial production 2 per cent
(ii) second period of commercial production 4 per cent

If, in the second period of commercial production, as defined in subparagraph (d), the return on investment in any accounting year as defined in subparagraph (a) falls below 15 per cent as a result of the payment of the production charge at 4 per cent, the production charge shall be 2 per cent instead of 4 per cent in that accounting year.

(b) The said market value shall be the product of the quantity of the processed metals produced from the polymetallic nodules recovered from the area covered by the contract and the average price for those metals during the relevant accounting year as defined in paragraphs 7 and 8.

(c) (i) The Authority's share of net proceeds shall be taken out of that portion of the contractor's net proceeds which is attributable to the mining of the resources of the area covered by the contract, referred to hereinafter as attributable net proceeds.

(ii) The Authority's share of attributable net proceeds shall be determined in accordance with the following incremental schedule:

<table>
<thead>
<tr>
<th>Portion of attributable net proceeds</th>
<th>Share of the Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>That portion representing a return on investment which is greater than 0 per cent, but less than 10 per cent</td>
<td>35 per cent</td>
</tr>
<tr>
<td>That portion representing a return on investment which is 10 per cent or greater, but less than 20 per cent</td>
<td>42.5 per cent</td>
</tr>
<tr>
<td>That portion representing a return on investment which is 20 per cent or greater</td>
<td>50 per cent</td>
</tr>
</tbody>
</table>

The first period of commercial production referred to in subparagraph (a) and (c) shall commence in the first accounting year of commercial production and terminate in the accounting year in which the contractor's development costs with interest on the unrecovered portion thereof are fully recovered by his cash surplus, as follows:

In the first accounting year during which development costs are incurred, unrecovered development costs shall equal the development costs less cash surplus in that year. In each subsequent accounting year, unrecovered development costs shall equal the unrecovered development costs at the end of the preceding accounting year, plus interest thereon at the rate of 10 per cent per annum, plus development costs incurred in the current accounting year and less contractor's cash surplus in the current accounting year. The accounting year in which unrecovered development costs become zero for the first time shall be the accounting year in which the contractor's development costs with interest on the unrecovered portion thereof are fully recovered by his cash surplus. The contractor's cash surplus in any accounting year shall be his gross proceeds less his operating costs and less his payments to the Authority under subparagraph (c).

The second period of commercial production shall commence in the accounting year following the termination of the first period of commercial production and shall continue until the end of the contract.

"Attributable net proceeds" means the product of the contractor's net proceeds and the ratio of the development costs in the mining sector to the contractor's development costs. If the contractor engages in mining, transporting polymetallic nodules and production primarily of three processed metals, namely, cobalt, copper and nickel, the amount of attributable net proceeds shall not be less than 25 per cent of the contractor's net proceeds. Subject to subparagraph (n), in all other cases, including those where the contractor engages in mining, transporting polymetallic nodules, and production primarily of four processed metals, namely, cobalt, copper, manganese and nickel, the Authority may, in its rules, regulations and procedures, prescribe appropriate floors which shall bear the same relationship to each case as the 25 per cent floor does to the three-metal case.

"Contractor's net proceeds" means the contractor's gross proceeds less his operating costs and less the recovery of his development costs as set out in subparagraph (j).

If the contractor engages in mining, transporting polymetallic nodules and production of processed metals, "contractor's gross proceeds" means the gross revenues from the sale of the processed metals and any other monies deemed reasonably attributable to operations under the contract in accordance with the financial rules, regulations and procedures of the Authority.
In all cases other than those specified in subparagraphs (g), (i) and (n), "contractor's gross proceeds" means the gross revenue from the sale of the semi-processed metals from the polymetallic nodules recovered from the area covered by the contract, and any other monies deemed reasonably attributable to operations under the contract in accordance with the financial rules, regulations, and procedures of the Authority.

"Contractor's development costs" means:

(i) all expenditures incurred prior to the commencement of commercial production which are directly related to the development of the productive capacity of the area covered by the contract and the activities related thereto for operations under the contract in all cases other than that specified in subparagraph (i), in conformity with generally recognized accounting principles, including, inter alia, costs of machinery, equipment, ships, processing plant, construction, buildings, land, roads, prospecting and exploration of the area covered by the contract, research and development, interest, required leases, licences and fees; and

(ii) expenditures similar to those set forth in (i) above incurred subsequent to the commencement of commercial production and necessary to carry out the plan of work, except those chargeable to operating costs.

The proceeds from the disposal of capital assets and the market value of those capital assets which are no longer required for operations under the contract and which are not sold shall be deducted from the contractor's development costs during the relevant accounting year. When these deductions exceed the contractor's development costs the excess shall be added to the contractor's gross proceeds.

The contractor's development costs incurred prior to the commencement of commercial production referred to in subparagraphs (h)(i) and (n)(iv) shall be recovered in 10 equal annual instalments from the date of commencement of commercial production. The contractor's development costs incurred subsequent to the commencement of commercial production referred to in subparagraphs (h)(ii) and (n)(iv) shall be recovered in 10 or fewer equal annual instalments so as to ensure their complete recovery by the end of the contract.

"Contractor's operating costs" means all expenditures incurred after the commencement of commercial production in the operation of the productive capacity of the area covered by the contract and the activities related thereto for operations under the contract, in conformity with generally recognized accounting principles, including, inter alia, the annual fixed fee or the production charge, whichever is greater, expenditures for wages, salaries, employee benefits, materials, services, transporting, processing and marketing costs, interest, utilities, preservation of the marine environment, overhead and administrative costs specifically related to operations under the contract, and any net operating losses carried forward or backward as specified herein. Net operating losses may be carried forward for two consecutive years except in the last two years of the contract in which case they may be carried backward to the two preceding years.

If the contractor engages in mining, transporting of polymetallic nodules, and production of processed and semi-processed metals, "development costs of the mining sector" means the portion of the contractor's development costs which is directly related to the mining of the resources of the area covered by the contract, in conformity with generally recognized accounting principles, and the financial rules, regulations, and procedures of the Authority, including, inter alia, application fee, annual fixed fee and, where applicable, costs of prospecting and exploration of the area covered by the contract, and a portion of research and development costs.

"Return on investment" in any accounting year means the ratio of attributable net proceeds in that year to the development costs of the mining sector. For the purpose of computing this ratio the development costs of the mining sector shall include expenditures on new or replacement equipment in the mining sector less the original cost of the equipment replaced.

If the contractor engages in mining only:

(i) "attributable net proceeds" means the whole of the contractor's net proceeds;

(ii) "contractor's net proceeds" shall be as defined in subparagraph (f);

(iii) "contractor's gross proceeds" means the gross revenues from the sale of the polymetallic nodules, and any other monies deemed reasonably attributable to operations under the contract in accordance with the financial rules, regulations and procedures of the Authority;

(iv) "contractor's development costs" means all expenditures incurred prior to the commencement of commercial production as set forth in subparagraph (h), and all expenditures incurred subsequent to the commencement of commercial production as set forth in subparagraph (h), which are directly related to the mining of the resources of the area covered by the contract, in conformity with generally recognized accounting principles;

(v) "contractor's operating costs" means the contractor's operating costs as in subparagraph (k) which are directly related to the mining of the resources of the area covered by the contract in conformity with generally recognized accounting principles;

(vi) "return on investment" in any accounting year means the ratio of the contractor's net proceeds in that year to the contractor's development costs. For the purpose of computing this ratio, the contractor's development costs shall include expenditures on new or replacement equipment less the original cost of the equipment replaced.
(o) The costs referred to in subparagraphs (h), (k), (l) and (n) in respect of interest paid by the contractor shall be allowed to the extent that, in all the circumstances, the Authority approves, pursuant to article 4, paragraph 1, of this Annex, the debt-equity ratio and the rates of interest as reasonable, having regard to existing commercial practice.

(p) The costs referred to in this paragraph shall not be interpreted as including payments of corporate income taxes or similar charges levied by States in respect of the operations of the contractor.

7. (a) "Processed metals", referred to in paragraphs 5 and 6, means the metals in the most basic form in which they are customarily traded on international terminal markets. For this purpose, the Authority shall specify, in its financial rules, regulations and procedures, the relevant international terminal market. For the metals which are not traded on such markets, "processed metals" means the metals in the most basic form in which they are customarily traded in representative arm's length transactions.

(b) If the Authority cannot otherwise determine the quantity of the processed metals produced from the polymetallic nodules recovered from the area covered by the contract referred to in paragraphs 5 (b) and 6 (b), the quantity shall be determined on the basis of the metal content of the nodules, processing recovery rates, and other relevant factors, in accordance with the rules, regulations and procedures of the Authority and in conformity with generally recognized accounting principles.

8. If an international terminal market provides a representative pricing mechanism for processed metals, polymetallic nodules and semi-processed metals from the nodules, the average price on that market shall be used. In all other cases, the Authority shall, after consulting the contractor, determine a fair price for the said products in accordance with paragraph 9.

9. (a) All costs, expenditures, proceeds and revenues and all determinations of price and value referred to in this article shall be the result of free market or arm's length transactions. In the absence thereof, they shall be determined by the Authority, after consulting the contractor, as though they were the result of free market or arm's length transactions, taking into account relevant transactions in other markets.

(b) In order to ensure compliance with and enforcement of the provisions of this paragraph, the Authority shall be guided by the principles adopted for, and the interpretation given to, arm's length transactions by the Commission on Transnational Corporations of the United Nations, the Group of Experts on Tax Treaties between Developing and Developed Countries and other international organizations, and shall, in its rules, regulations and procedures, specify uniform and internationally acceptable accounting rules and procedures, and the means of selection by the contractor of certified independent accountants acceptable to the Authority for the purpose of carrying out auditing in compliance with those rules, regulations and procedures.
Article 15
Training programmes

The contractor shall draw up practical programmes for the training of personnel of the Authority and developing States, including the participation of such personnel in all activities in the Area which are covered by the contract, in accordance with article 144, paragraph 2.

Article 16
Exclusive right to explore and exploit

The Authority shall, pursuant to Part XI and its rules, regulations and procedures, accord the operator the exclusive right to explore and exploit the area covered by the plan of work in respect of a specified category of resources and shall ensure that no other entity operates in the same area for a different category of resources in a manner which might interfere with the operations of the operator. The operator shall have security of tenure in accordance with article 153, paragraph 6.

Article 17
Rules, regulations and procedures of the Authority

1. The Authority shall adopt and uniformly apply rules, regulations and procedures in accordance with article 160, paragraph 2(f)(ii), and article 162, paragraph 2(a)(ii), for the exercise of its functions as set forth in Part XI on, inter alia, the following matters:

(a) administrative procedures relating to prospecting, exploration and exploitation in the Area;

(b) operations:

(i) size of area;

(ii) duration of operations;

(iii) performance requirements including assurances pursuant to article 4, paragraph 6(c), of this Annex;

(iv) categories of resources;

(v) renunciation of areas;

(vi) progress reports;

(vii) submission of data;

(viii) inspection and supervision of operations;

(ix) prevention of interference with other activities in the marine environment;

(x) transfer of rights and obligations by a contractor;

(xi) procedures for transfer of technology to developing States in accordance with article 144 and for their direct participation;

(xii) mining standards and practices, including those relating to operational safety, conservation of the resources and the protection of the marine environment;

(xiii) definition of commercial production;

(xiv) qualification standards for applicants;

(c) financial matters:

(i) establishment of uniform and non-discriminatory costing and accounting rules and the method of selection of auditors;

(ii) apportionment of proceeds of operations;

(iii) the incentives referred to in article 13 of this Annex;

(d) implementation of decisions taken pursuant to article 151, paragraph 10, and article 164, paragraph 2(d).

2. Rules, regulations and procedures on the following items shall fully reflect the objective criteria set out below:

(a) Size of areas:

The Authority shall determine the appropriate size of areas for exploration which may be up to twice as large as those for exploitation in order to permit intensive exploration operations. The size of area shall be calculated to satisfy the requirements of article 8 of this Annex on reservation of areas as well as stated production requirements consistent with article 151 in accordance with the terms of the contract taking into account the state of the art of technology then available for sea-bed mining and the relevant physical characteristics of the areas. Areas shall be neither smaller nor larger than are necessary to satisfy this objective.

(b) Duration of operations:

(i) Prospecting shall be without time-limit;

(ii) Exploration should be of sufficient duration to permit a thorough survey of the specific area, the design and construction of mining equipment for the area and the design and construction of small and medium-size processing plants for the purpose of testing mining and processing systems;
(iii) The duration of exploitation should be related to the economic life of the mining project, taking into consideration such factors as the depletion of the ore, the useful life of mining equipment and processing facilities and commercial viability. Exploitation should be of sufficient duration to permit commercial extraction of minerals of the area and should include a reasonable time period for construction of commercial-scale mining and processing systems, during which period commercial production should not be required. The total duration of exploitation, however, should also be short enough to give the Authority an opportunity to amend the terms and conditions of the plan of work at the time it considers renewal in accordance with rules, regulations and procedures which it has adopted subsequently to approving the plan of work.

(c) Performance requirements:

The Authority shall require that during the exploration stage periodic expenditures be made by the operator which are reasonably related to the size of the area covered by the plan of work and the expenditures which would be expected of a bona fide operator who intended to bring the area into commercial production within the time-limits established by the Authority. The required expenditures should not be established at a level which would discourage prospective operators with less costly technology than is prevalently in use. The Authority shall establish a maximum time interval, after the exploration stage is completed and the exploitation stage begins, to achieve commercial production. To determine this interval, the Authority should take into consideration that construction of large-scale mining and processing systems cannot be initiated until after the termination of the exploration stage and the commencement of the exploitation stage. Accordingly, the interval to bring an area into commercial production should take into account the time necessary for this construction after the completion of the exploration stage and reasonable assurance should be made for unavoidable delays in the construction schedule. Once commercial production is achieved, the Authority shall within reasonable time limits and taking into consideration all relevant factors require the operator to maintain commercial production throughout the period of the plan of work.

(d) Categories of resources:

In determining the category of resources in respect of which a plan of work may be approved, the Authority shall give emphasis inter alia to the following characteristics:

(i) that certain resources require the use of similar mining methods; and

(ii) that some resources can be developed simultaneously without undue interference between operators developing different resources in the same area.

Nothing in this subparagraph shall preclude the Authority from approving a plan of work with respect to more than one category of resources in the same area to the same applicant.

(e) Renunciation of areas:

The operator shall have the right at any time to renounce without penalty the whole or part of his rights in the area covered by a plan of work.

(f) Protection of the marine environment:

Rules, regulations and procedures shall be drawn up in order to secure effective protection of the marine environment from harmful effects directly resulting from activities in the area or from shipboard processing immediately above a mine site of minerals derived from that mine site, taking into account the extent to which such harmful effects may directly result from drilling, dredging, coring and excavation and from disposal, dumping and discharge into the marine environment of sediment, wastes or other effluents.

(g) Commercial production:

Commercial production shall be deemed to have begun if an operator engages in sustained large-scale recovery operations which yield a quantity of materials sufficient to indicate clearly that the principal purpose is large-scale production rather than production intended for information gathering, analysis or the testing of equipment or plant.

Article 38
Penalties

1. A contractor's rights under the contract may be suspended or terminated only in the following cases:

(a) if, in spite of warnings by the Authority, the contractor has conducted his activities in such a way as to result in serious, persistent and wilful violations of the fundamental terms of the contract, Part XI and the rules, regulations and procedures of the Authority; or

(b) if the contractor has failed to comply with a final binding decision of the dispute settlement body applicable to him.

2. In the case of any violation of the contract not covered by paragraph 1(a), or in lieu of suspension or termination under paragraph 1(a), the Authority may impose upon the contractor monetary penalties proportionate to the seriousness of the violation.

3. Except for emergency orders under article 162, paragraph 2(w), the Authority may not execute a decision involving monetary penalties, suspension or termination until the contractor has been accorded a reasonable opportunity to exhaust the judicial remedies available to him pursuant to Part XI, section 5.
Article 19
Revision of contract

1. When circumstances have arisen or are likely to arise which, in the opinion of either party, would render the contract inequitable or make it impracticable or impossible to achieve the objectives set out in the contract or in Part XI, the parties shall enter into negotiations to revise it accordingly.

2. Any contract entered into in accordance with article 153, paragraph 3, may be revised only with the consent of the parties.

Article 20
Transfer of rights and obligations

The rights and obligations arising under a contract may be transferred only with the consent of the Authority, and in accordance with its rules, regulations and procedures. The Authority shall not unreasonably withhold consent to the transfer if the proposed transferee is in all respects a qualified applicant and assumes all of the obligations of the transferor and if the transfer does not confer to the transferee a plan of work, the approval of which would be forbidden by article 6, paragraph 3(c), of this Annex.

Article 21
Applicable law

1. The contract shall be governed by the terms of the contract, the rules, regulations and procedures of the Authority, Part XI and other rules of international law not incompatible with this Convention.

2. Any final decision rendered by a court or tribunal having jurisdiction under this Convention relating to the rights and obligations of the Authority and of the contractor shall be enforceable in the territory of each State Party.

3. No State Party may impose conditions on a contractor that are inconsistent with Part XI. However, the application by a State Party to contractors sponsored by it, or to ships flying its flag, of environmental or other laws and regulations more stringent than those in the rules, regulations and procedures of the Authority adopted pursuant to article 17, paragraph 2(f), of this Annex shall not be deemed inconsistent with Part XI.

Article 22
Responsibility

The contractor shall have responsibility or liability for any damage arising out of wrongful acts in the conduct of its operations, account being taken of contributory acts or omissions by the Authority. Similarly, the Authority shall have responsibility or liability for any damage arising out of wrongful acts in the exercise of its powers and functions, including violations under article 168, paragraph 2, account being taken of contributory acts or omissions by the contractor. Liability in every case shall be for the actual amount of damage.

ANNEX IV. STATUTE OF THE ENTERPRISE

Article 1
Purposes

1. The Enterprise is the organ of the Authority which shall carry out activities in the Area directly, pursuant to article 153, paragraph 2(a), as well as the transporting, processing and marketing of minerals recovered from the Area.

2. In carrying out its purposes and in the exercise of its functions, the Enterprise shall act in accordance with this Convention and the rules, regulations and procedures of the Authority.

3. In developing the resources of the Area pursuant to paragraph 1, the Enterprise shall, subject to this Convention, operate in accordance with sound commercial principles.

Article 2
Relationship to the Authority

1. Pursuant to article 170, the Enterprise shall act in accordance with the general policies of the Assembly and the directives of the Council.

2. Subject to paragraph 1, the Enterprise shall enjoy autonomy in the conduct of its operations.

3. Nothing in this Convention shall make the Enterprise liable for the acts or obligations of the Authority, or make the Authority liable for the acts or obligations of the Enterprise.

Article 3
Limitation of liability

Without prejudice to article 12, paragraph 3, of this Annex, no member of the Authority shall be liable by reason only of its membership for the acts or obligations of the Enterprise.

Article 4
Structure

The Enterprise shall have a Governing Board, a Director-General and the staff necessary for the exercise of its functions.

Article 5
Governing Board

1. The Governing Board shall be composed of 15 members elected by the Assembly in accordance with article 160, paragraph 2(e). In the election of the members of the Board, due regard shall be paid to the principle of equitable geographical distribution. In submitting nominations of candidates for election to the Board, members of the Authority shall bear in mind the need to nominate candidates of the highest standard of competence, with qualifications in relevant fields, so as to ensure the viability and success of the Enterprise.
2. Members of the Board shall be elected for four years and may be re-elected; and due regard shall be paid to the principle of rotation of membership.

3. Members of the Board shall continue in office until their successors are elected. If the office of a member of the Board becomes vacant, the Assembly shall, in accordance with article 160, paragraph 2(c), elect a new member for the remainder of his predecessor's term.

4. Members of the Board shall act in their personal capacity. In the performance of their duties they shall not seek or receive instructions from any government or from any other source. Each member of the Authority shall respect the independent character of the members of the Board and shall refrain from all attempts to influence any of them in the discharge of their duties.

5. Each member of the Board shall receive remuneration to be paid out of the funds of the Enterprise. The amount of remuneration shall be fixed by the Assembly, upon the recommendation of the Council.

6. The Board shall normally function at the principal office of the Enterprise and shall meet as often as the business of the Enterprise may require.

7. Two thirds of the members of the Board shall constitute a quorum.

8. Each member of the Board shall have one vote. All matters before the Board shall be decided by a majority of its members. If a member has a conflict of interest on a matter before the Board, he shall refrain from voting on that matter.

9. Any member of the Authority may ask the Board for information in respect of its operations which particularly affect that member. The Board shall endeavour to provide such information.

Article 6
Powers and functions of the Governing Board

The Governing Board shall direct the operations of the Enterprise. Subject to this Convention, the Governing Board shall exercise the powers necessary to fulfil the purposes of the Enterprise, including powers:

(a) to elect a Chairman from among its members;

(b) to adopt its rules of procedure;

(c) to draw up and submit formal written plans of work to the Council in accordance with article 153, paragraph 3, and article 162, paragraph 2(f);

(d) to develop plans of work and programmes for carrying out the activities specified in article 170;

(e) to prepare and submit to the Council applications for production authorizations in accordance with article 151, paragraphs 2 to 7; (f) to authorize negotiations concerning the acquisition of technology, including those provided for in Annex III, article 5, paragraph 3 (a), (c) and (d), and to approve the results of those negotiations;

(g) to establish terms and conditions, and to authorize negotiations, concerning joint ventures and other forms of joint arrangements referred to in Annex III, articles 9 and 11, and to approve the results of such negotiations;

(h) to recommend to the Assembly what portion of the net income of the Enterprise should be retained as its reserves in accordance with article 160, paragraph 2(f), and article 10 of this Annex;

(i) to approve the annual budget of the Enterprise;

(j) to authorize the procurement of goods and services in accordance with article 12, paragraph 3, of this Annex;

(k) to submit an annual report to the Council in accordance with article 9 of this Annex;

(l) to submit to the Council for the approval of the Assembly draft rules in respect of the organization, management, appointment and dismissal of the staff of the Enterprise and to adopt regulations to give effect to such rules;

(m) to borrow funds and to furnish such collateral or other security as it may determine in accordance with article 11, paragraph 2, of this Annex;

(n) to enter into any legal proceedings, agreements and transactions and to take any other actions in accordance with article 13 of this Annex;

(o) to delegate, subject to the approval of the Council, any non-discretionary powers to the Director-General and to its committees.

Article 7
Director-General and staff of the Enterprise

1. The Assembly shall, upon the recommendation of the Council and the nomination of the Governing Board, elect the Director-General of the Enterprise who shall not be a member of the Board. The Director-General shall hold office for a fixed term, not exceeding five years, and may be re-elected for further terms.

2. The Director-General shall be the legal representative and chief executive of the Enterprise and shall be directly responsible to the Board for the conduct of the operations of the Enterprise. He shall be responsible for the organization, management, appointment and dismissal of the staff of the Enterprise in accordance with the rules and regulations referred to in article 6, subparagraph (i) of this Annex. He shall participate, without the right to vote, in the meetings of the Board and may participate, without the right to vote, in the meetings of the Assembly and the Council when these organs are dealing with matters concerning the Enterprise.
3. The paramount consideration in the recruitment and employment of the staff and in the determination of their conditions of service shall be the necessity of securing the highest standards of efficiency and of technical competence. Subject to this consideration, due regard shall be paid to the importance of recruiting the staff on an equitable geographical basis.

4. In the performance of their duties the Director-General and the staff shall not seek or receive instructions from any government or from any other source external to the Enterprise. They shall refrain from any action which might reflect on their position as international officials of the Enterprise responsible only to the Enterprise. Each State Party undertakes to respect the exclusively international character of the responsibilities of the Director-General and the staff and not to seek to influence them in the discharge of their responsibilities.

5. The responsibilities set forth in article 168, paragraph 2, are equally applicable to the staff of the Enterprise.

Article 8
Location

The Enterprise shall have its principal office at the seat of the Authority. The Enterprise may establish other offices and facilities in the territory of any State Party with the consent of that State Party.

Article 9
Reports and financial statements

1. The Enterprise shall, not later than three months after the end of each financial year, submit to the Council for its consideration an annual report containing an audited statement of its accounts and shall transmit to the Council at appropriate intervals a summary statement of its financial position and a profit and loss statement showing the results of its operations.

2. The Enterprise shall publish its annual report and such other reports as it finds appropriate.

3. All reports and financial statements referred to in this article shall be distributed to the members of the Authority.

Article 10
Allocation of net income

1. Subject to paragraph 3, the Enterprise shall make payments to the Authority under Annex III, article 13, or their equivalent.

2. The Assembly shall, upon the recommendation of the Governing Board, determine what portion of the net income of the Enterprise shall be retained as reserves of the Enterprise. The remainder shall be transferred to the Authority.

3. During an initial period required for the Enterprise to become self-supporting, which shall not exceed 10 years from the commencement of commercial production by it, the Assembly shall exempt the Enterprise from the payments referred to in paragraph 1, and shall leave all of the net income of the Enterprise in its reserves.

1. The funds of the Enterprise shall include:

   (a) amounts received from the Authority in accordance with article 173, paragraph 2(b);

   (b) voluntary contributions made by States Parties for the purpose of financing activities of the Enterprise;

   (c) amounts borrowed by the Enterprise in accordance with paragraphs 2 and 3;

   (d) income of the Enterprise from its operations;

   (e) other funds made available to the Enterprise to enable it to commence operations as soon as possible and to carry out its functions.

2. (a) The Enterprise shall have the power to borrow funds and to furnish such collateral or other security as it may determine. Before making a public sale of its obligations in the financial markets or currency of a State Party, the Enterprise shall obtain the approval of that State Party. The total amount of borrowings shall be approved by the Council upon the recommendation of the Governing Board.

(b) States Parties shall make every reasonable effort to support applications by the Enterprise for loans on capital markets and from international financial institutions.

3. (a) The Enterprise shall be provided with the funds necessary to explore and exploit one mine site, and to transport, process and market the minerals recovered therefrom and the nickel, copper, cobalt and manganese obtained, and to meet its initial administrative expenses. The amount of the said funds, and the criteria and factors for its adjustment, shall be included by the Preparatory Commission in the draft rules, regulations and procedures of the Authority.

(b) All States Parties shall make available to the Enterprise an amount equivalent to one half of the funds referred to in subparagraph (a) by way of long-term interest-free loans in accordance with the scale of assessments for the United Nations regular budget in force at the time when the assessments are made, adjusted to take into account the States which are not members of the United Nations. Debts incurred by the Enterprise in raising the other half of the funds shall be guaranteed by all States Parties in accordance with the same scale.

(c) If the sum of the financial contributions of States Parties is less than the funds to be provided to the Enterprise under subparagraph (a), the Assembly shall, at its first session, consider the extent of the shortfall and adopt by consensus measures for dealing with this shortfall, taking into account the obligation of States Parties under subparagraphs (a) and (b) and any recommendations of the Preparatory Commission.
(d) Each State Party shall, within 60 days after the entry into force of this Convention, or within 30 days after the deposit of its instrument of ratification or accession, whichever is later, deposit with the Enterprise irrevocable, non-negotiable, non-interest-bearing promissory notes in the amount of the share of each such State Party of interest-free loans pursuant to subparagraph (b).

(i) The Board shall prepare, at the earliest practicable date after this Convention enters into force, and thereafter at annual or other appropriate intervals, a schedule of the magnitude and timing of its requirements for the funding of its administrative expenses and for activities carried out by the Enterprise in accordance with article 170 and article 12 of this Annex.

(iii) The States Parties shall, thereupon, be notified by the Enterprise, through the Authority, of their respective shares of the funds in accordance with subparagraph (b), required for such expenses. The Enterprise shall encash such amounts of the promissory notes as may be required to meet the expenditure referred to in the schedule with respect to interest-free loans.

(iv) States Parties shall, upon receipt of the notification, make available their respective shares of debt guarantees for the Enterprise in accordance with subparagraph (b).

(e) If the Enterprise so requests, States Parties may provide debt guarantees in addition to those provided in accordance with the scale referred to in subparagraph (b).

(1) In lieu of debt guarantees, a State Party may make a voluntary contribution to the Enterprise in an amount equivalent to that portion of the debts which it would otherwise be liable to guarantee.

(f) Repayment of the interest-bearing loans shall have priority over the repayment of the interest-free loans. Repayment of interest-free loans shall be in accordance with a schedule adopted by the Assembly, upon the recommendation of the Council and the advice of the Board. In the exercise of this function the Board shall be guided by the relevant provisions of the rules, regulations and procedures of the Authority, which shall take into account the paramount importance of ensuring the effective functioning of the Enterprise and, in particular, ensuring its financial independence.

(g) Funds made available to the Enterprise shall be in freely usable currencies or currencies which are freely available and effectively usable in the major foreign exchange markets. These currencies shall be defined in the rules, regulations and procedures of the Authority in accordance with prevailing international monetary practice. Except as provided in paragraph 2, no State Party shall maintain or impose restrictions on the holding, use or exchange by the Enterprise of these funds.

(h) "Debt guarantee" means a promise of a State Party to creditors of the Enterprise to pay, pro rata in accordance with the appropriate scale, the financial obligations of the Enterprise covered by the guarantee following notice by the creditors to the State Party of a default by the Enterprise. Procedures for the payment of those obligations shall be in conformity with the rules, regulations and procedures of the Authority.

4. The funds, assets and expenses of the Enterprise shall be kept separate from those of the Authority. This article shall not prevent the Enterprise from making arrangements with the Authority regarding facilities, personnel and services and arrangements for reimbursement of administrative expenses paid by either on behalf of the other.

5. The Records, books and accounts of the Enterprise, including its annual financial statements, shall be audited annually by an independent auditor appointed by the Council.

Article 12

Operations

1. The Enterprise shall propose to the Council projects for carrying out activities in accordance with article 170. Such proposals shall include a formal written plan of work for activities in the Area in accordance with article 153, paragraph 3, and all such other information and data as may be required from time to time for its appraisal by the Legal and Technical Commission and approval by the Council.

2. Upon approval by the Council, the Enterprise shall execute the project on the basis of the formal written plan of work referred to in paragraph 1.

3. (a) If the Enterprise does not possess the goods and services required for its operations it may procure them. For that purpose, it shall issue invitations to tender and award contracts to bidders offering the best combination of quality, price and delivery time.

(b) If there is more than one bid offering such a combination, the contract shall be awarded in accordance with:

(i) the principle of non-discrimination on the basis of political or other considerations not relevant to the carrying out of operations with due diligence and efficiency; and

(ii) guidelines approved by the Council with regard to the preferences to be accorded to goods and services originating in developing States, including the land-locked and geographically disadvantaged among them.

(c) The Governing Board may adopt rules determining the special circumstances in which the requirement of invitations to bid may, in the best interests of the Enterprise, be dispensed with.

4. The Enterprise shall have title to all minerals and processed substances produced by it.

5. The Enterprise shall sell its products on a non-discriminatory basis. It shall not give non-commercial discounts.
6. Without prejudice to any general or special power conferred on the Enterprise, under any other provision of this Convention, the Enterprise shall exercise such powers incidental to its business as shall be necessary.

7. The Enterprise shall not interfere in the political affairs of any State Party nor shall it be influenced in its decisions by the political character of the State Party concerned. Only commercial considerations shall be relevant to its decisions, and those considerations shall be weighed impartially in order to carry out the purposes specified in article 1 of this Annex.

Article 13
Legal status, privileges and immunities

1. To enable the Enterprise to exercise its functions, the status, privileges and immunities set forth in this article shall be accorded to the Enterprise in the territories of States Parties. To give effect to this principle the Enterprise and States Parties may, where necessary, enter into special agreements.

2. The Enterprise shall have such legal capacity as is necessary for the exercise of its functions and the fulfilment of its purposes and, in particular, the capacity:

(a) to enter into contracts, joint arrangements or other arrangements, including agreements with States and international organisations;

(b) to acquire, lease, hold and dispose of immovable and movable property;

(c) to be a party to legal proceedings.

3. (a) Actions may be brought against the Enterprise only in a court of competent jurisdiction in the territory of a State Party in which the Enterprise:

(i) has an office or facility;

(ii) has appointed an agent for the purpose of accepting service or notice of process;

(iii) has entered into a contract for goods or services;

(iv) has issued securities; or

(v) is otherwise engaged in commercial activity.

(b) The property and assets of the Enterprise, wherever located and by whomever held, shall be immune from all forms of seizure, attachment or execution before the delivery of final judgment against the Enterprise.

4. (a) The property and assets of the Enterprise, wherever located and by whomever held, shall be immune from requisition, confiscation, expropriation or any other form of seizure by executive or legislative action.

(b) The property and assets of the Enterprise, wherever located and by whomever held, shall be free from discriminatory restrictions, regulations, controls and moratoria of any nature.

(c) The Enterprise and its employees shall respect local laws and regulations in any State or territory in which the Enterprise or its employees may do business or otherwise act.

(d) States Parties shall ensure that the Enterprise enjoys all rights, privileges and immunities accorded by them to entities conducting commercial activities in their territories. These rights, privileges and immunities shall be accorded to the Enterprise on no less favourable a basis than that on which they are accorded to entities engaged in similar commercial activities. If special privileges are provided by States Parties for developing States or their commercial entities, the Enterprise shall enjoy those privileges on a similarly preferential basis.

(e) States Parties may provide special incentives, rights, privileges and immunities to the Enterprise without the obligation to provide such incentives, rights, privileges and immunities to other commercial entities.

5. The Enterprise shall negotiate with the host countries in which its offices and facilities are located for exemption from direct and indirect taxation.

6. Each State Party shall take such action as is necessary for giving effect in terms of its own law to the principles set forth in this Annex and shall inform the Enterprise of the specific action which it has taken.

7. The Enterprise may waive any of the privileges and immunities conferred under this article or in the special agreements referred to in paragraph 1 to such extent and upon such conditions as it may determine.
ANNEX V. CONCILIATION

SECTION 1. CONCILIATION PROCEDURE PURSUANT TO SECTION 1 OF PART XV

Article 1
Institution of proceedings

If the parties to a dispute have agreed, in accordance with article 284, to submit it to conciliation under this section, any such party may institute the proceedings by written notification addressed to the other party or parties to the dispute.

Article 2
List of conciliators

A list of conciliators shall be drawn up and maintained by the Secretary-General of the United Nations. Every State Party shall be entitled to nominate four conciliators, each of whom shall be a person enjoying the highest reputation for fairness, competence and integrity. The names of the persons so nominated shall constitute the list. If at any time the conciliators nominated by a State Party in the list so constituted shall be fewer than four, that State Party shall be entitled to make further nominations as necessary. The name of a conciliator shall remain on the list until withdrawn by the State Party which made the nomination, provided that such conciliator shall continue to serve on any conciliation commission to which that conciliator has been appointed until the completion of the proceedings before that commission.

Article 3
Constitution of conciliation commission

The conciliation commission shall, unless the parties otherwise agree, be constituted as follows:

(a) Subject to subparagraph (g), the conciliation commission shall consist of five members.

(b) The party instituting the proceedings shall appoint two conciliators to be chosen preferably from the list referred to in article 2 of this Annex, one of whom may be its national, unless the parties otherwise agree. Such appointments shall be included in the notification referred to in article 1 of this Annex.

(c) The other party to the dispute shall appoint two conciliators in the manner set forth in subparagraph (b) within 21 days of receipt of the notification referred to in article 1 of this Annex. If the appointments are not made within that period, the party instituting the proceedings may, within one week of the expiration of that period, either terminate the proceedings by notification addressed to the other party or request the Secretary-General of the United Nations to make the appointments in accordance with subparagraph (e).

(d) Within 30 days after all four conciliators have been appointed, they shall appoint a fifth conciliator chosen from the list referred to in article 2 of this Annex, who shall be chairman. If the appointment is not made within that period, either party may, within one week of the expiration of that period, request the Secretary-General of the United Nations to make the appointment in accordance with subparagraph (e).

(e) Within 30 days of the receipt of a request under subparagraph (c) or (d), the Secretary-General of the United Nations shall make the necessary appointments from the list referred to in article 2 of this Annex in consultation with the parties to the dispute.

(f) Any vacancy shall be filled in the manner prescribed for the initial appointment.

(g) Two or more parties which determine by agreement that they are in the same interest shall appoint two conciliators jointly. Where two or more parties have separate interests or there is a disagreement as to whether they are of the same interest, they shall appoint conciliators separately.

(h) In disputes involving more than two parties having separate interests, or where there is disagreement as to whether they are of the same interest, the parties shall apply subparagraphs (a) to (f) in so far as possible.

Article 4
Procedure

The conciliation commission shall, unless the parties otherwise agree, determine its own procedure. The commission may, with the consent of the parties to the dispute, invite any State Party to submit to it its views orally or in writing. Decisions of the commission regarding procedural matters, the report and recommendations shall be made by a majority vote of its members.

Article 5
Amicable settlement

The commission may draw the attention of the parties to any measures which might facilitate an amicable settlement of the dispute.

Article 6
Functions of the commission

The commission shall hear the parties, examine their claims and objections, and make proposals to the parties with a view to reaching an amicable settlement.
Article 7
Report

1. The commission shall report within 12 months of its constitution. Its report shall record any agreements reached and, failing agreement, its conclusions on all questions of fact or law relevant to the matter in dispute and such recommendations as the commission may deem appropriate for an amicable settlement. The report shall be deposited with the Secretary-General of the United Nations and shall immediately be transmitted by him to the parties to the dispute.

2. The report of the commission, including its conclusions or recommendations, shall not be binding upon the parties.

Article 8
Termination

The conciliation proceedings are terminated when a settlement has been reached, when the parties have accepted or one party has rejected the recommendations of the report by written notification addressed to the Secretary-General of the United Nations, or when a period of three months has expired from the date of transmission of the report to the parties.

Article 9
Fees and expenses

The fees and expenses of the commission shall be borne by the parties to the dispute.

Article 10
Right of parties to modify procedure

The parties to the dispute may by agreement applicable solely to that dispute modify any provision of this Annex.

SECTION 2. COMPULSORY SUBMISSION TO CONCILIATION PROCEDURE
Pursuant to Section 3 of Part XV

Article 11
Institution of proceedings

1. Any party to a dispute which, in accordance with Part XV, section 3, may be submitted to conciliation under this section, may institute the proceedings by written notification addressed to the other party or parties to the dispute.

2. Any party to the dispute, notified under paragraph 1, shall be obliged to submit to such proceedings.

Article 12
Failure to reply or to submit to conciliation

The failure of a party or parties to the dispute to reply to notification of institution of proceedings or to submit to such proceedings shall not constitute a bar to the proceedings.
ANNEX VI. STATUTE OF THE INTERNATIONAL TRIBUNAL
FOR THE LAW OF THE SEA

Article 1
General provisions

1. The International Tribunal for the Law of the Sea is constituted and shall function in accordance with the provisions of this Convention and this Statute.

2. The seat of the Tribunal shall be in the Free and Hanseatic City of Hamburg in the Federal Republic of Germany.

3. The Tribunal may sit and exercise its functions elsewhere whenever it considers this desirable.

4. A reference of a dispute to the Tribunal shall be governed by the provisions of Parts XI and XV.

SECTION I. ORGANISATION OF THE TRIBUNAL

Article 2
Composition

1. The Tribunal shall be composed of a body of 21 independent members, elected from among persons enjoying the highest reputation for fairness and integrity and of recognized competence in the field of the law of the sea.

2. In the Tribunal as a whole the representation of the principal legal systems of the world and equitable geographical distribution shall be assured.

Article 3
Membership

1. No two members of the Tribunal may be nationals of the same State. A person who for the purposes of membership in the Tribunal could be regarded as national of more than one State shall be deemed to be a national of the one in which he ordinarily exercises civil and political rights.

2. There shall be no fewer than three members from each geographical group as established by the General Assembly of the United Nations.

Article 4
Nominations and elections

1. Each State Party may nominate not more than two persons having the qualifications prescribed in article 2 of this Annex. The members of the Tribunal shall be elected from the list of persons thus nominated.

2. At least three months before the date of the election, the Secretary-General of the United Nations in the case of the first election and the Registrar of the Tribunal in the case of subsequent elections shall address a written invitation to the States Parties to submit their nominations for members of the Tribunal within two months. He shall prepare a list in alphabetical order of all the persons thus nominated, with an indication of the States Parties which have nominated them, and shall submit it to the States Parties before the seventh day of the last month before the date of each election.

3. The first election shall be held within six months of the date of entry into force of this Convention.

4. The members of the Tribunal shall be elected by secret ballot. Elections shall be held at a meeting of the States Parties convened by the Secretary-General of the United Nations in the case of the first election and by a procedure agreed to by the States Parties in the case of subsequent elections. Two thirds of the States Parties shall constitute a quorum at that meeting. The persons elected to the Tribunal shall be those nominees who obtain the largest number of votes and a two-thirds majority of the States Parties present and voting, provided that such majority includes a majority of the States Parties.

Article 5
Term of office

1. The members of the Tribunal shall be elected for nine years and may be re-elected; provided, however, that of the members elected at the first election, the terms of seven members shall expire at the end of three years and the terms of seven more members shall expire at the end of six years.

2. The members of the Tribunal whose terms are to expire at the end of the above-mentioned initial periods of three and six years shall be chosen by lot to be drawn by the Secretary-General of the United Nations immediately after the first election.

3. The members of the Tribunal shall continue to discharge their duties until their places have been filled. Though replaced, they shall finish any proceedings which they may have begun before the date of their replacement.

4. In the case of the resignation of a member of the Tribunal, the letter of resignation shall be addressed to the President of the Tribunal. The place becomes vacant on the receipt of that letter.

Article 6
Vacancies

1. Vacancies shall be filled by the same method as that laid down for the first election, subject to the following provision: the Registrar shall, within one month of the occurrence of the vacancy, proceed to issue the invitations provided for in article 4 of this Annex, and the date of the election shall be fixed by the President of the Tribunal after consultation with the States parties.

2. A member of the Tribunal elected to replace a member whose term of office has not expired shall hold office for the remainder of his predecessor's term.
Article 7
Incompatible activities

1. No member of the Tribunal may exercise any political or administrative function, or associate actively with or be financially interested in any of the operations of any enterprise concerned with the exploration for or exploitation of the resources of the sea or the sea-bed or other commercial use of the sea or the sea-bed.

2. No member of the Tribunal may act as agent, counsel or advocate in any case.

3. Any doubt on these points shall be resolved by decision of the majority of the other members of the Tribunal present.

Article 8
Conditions relating to participation of members in a particular case

1. No member of the Tribunal may participate in the decision of any case in which he has previously taken part as agent, counsel or advocate for one of the parties, or as a member of a national or international court or tribunal, or in any other capacity.

2. If, for some special reason, a member of the Tribunal considers that he should not take part in the decision of a particular case, he shall so inform the President of the Tribunal.

3. If the President considers that for some special reason one of the members of the Tribunal should not sit in a particular case, he shall give him notice accordingly.

4. Any doubt on these points shall be resolved by decision of the majority of the other members of the Tribunal present.

Article 9
Consequence of ceasing to fulfil required conditions

If, in the unanimous opinion of the other members of the Tribunal, a member has ceased to fulfil the required conditions, the President of the Tribunal shall declare the seat vacant.

Article 10
Privileges and immunities

The members of the Tribunal, when engaged on the business of the Tribunal, shall enjoy diplomatic privileges and immunities.

Article 11
Solemn declaration by members

Every member of the Tribunal shall, before taking up his duties, make a solemn declaration in open session that he will exercise his powers impartially and conscientiously.

Article 12
President, Vice-President and Registrar

1. The Tribunal shall elect its President and Vice-President for three years; they may be re-elected.

2. The Tribunal shall appoint its Registrar and may provide for the appointment or such other officers as may be necessary.

3. The President and the Registrar shall reside at the seat of the Tribunal.

Article 13
Quorum

1. All available members of the Tribunal shall sit; a quorum of 11 elected members shall be required to constitute the Tribunal.

2. Subject to article 17 of this Annex, the Tribunal shall determine which members are available to constitute the Tribunal for the consideration of a particular dispute, having regard to the effective functioning of the chambers as provided for in articles 14 and 15 of this Annex.

3. All disputes and applications submitted to the Tribunal shall be heard and determined by the Tribunal, unless article 14 of this Annex applies, or the parties request that it shall be dealt with in accordance with article 15 of this Annex.

Article 14
Sea-Bed Disputes Chamber

A Sea-Bed Disputes Chamber shall be established in accordance with the provisions of section 4 of this Annex. Its jurisdiction, powers and functions shall be as provided for in Part XI, section 5.

Article 15
Special chambers

1. The Tribunal may form such chambers, composed of three or more of its elected members, as it considers necessary for dealing with particular categories of disputes.

2. The Tribunal shall form a chamber for dealing with a particular dispute submitted to it if the parties so request. The composition of such a chamber shall be determined by the Tribunal with the approval of the parties.

3. With a view to the speedy dispatch of business, the Tribunal shall form annually a chamber composed of five of its elected members which may hear and determine disputes by summary procedure. Two alternative members shall be selected for the purpose of replacing members who are unable to participate in a particular proceeding.

4. Disputes shall be heard and determined by the chambers provided for in this article if the parties so request.

5. A judgment given by any of the chambers provided for in this article and in article 14 of this Annex shall be considered as rendered by the Tribunal.
Article 16

Rules of the Tribunal

The Tribunal shall frame rules for carrying out its functions. In particular it shall lay down rules of procedure.

Article 17

Nationality of members

1. Members of the Tribunal of the nationality of any of the parties to a dispute shall retain their right to participate as members of the Tribunal.

2. If the Tribunal, when hearing a dispute, includes upon the bench a member of the nationality of one of the parties, any other party may choose a person to participate as a member of the Tribunal.

3. If the Tribunal, when hearing a dispute, does not include upon the bench a member of the nationality of the parties, each of those parties may choose a person to participate as a member of the Tribunal.

4. This article applies to the chambers referred to in articles 14 and 15 of this Annex. In such cases, the President, in consultation with the parties, shall request specified members of the Tribunal forming the chamber, as many as necessary, to give place to the members of the Tribunal of the nationality of the parties concerned, and, failing such, or if they are unable to be present, to the members specially chosen by the parties.

5. Should there be several parties in the same interest, they shall, for the purpose of the preceding provisions, be considered as one party only. Any doubt on this point shall be settled by the decision of the Tribunal.

6. Members chosen in accordance with paragraphs 2, 3 and 4 shall fulfil the conditions required by articles 2, 8 and 11 of this Annex. They shall participate in the decision on terms of complete equality with their colleagues.

Article 18

Remuneration of members

1. Each elected member of the Tribunal shall receive an annual allowance and, for each day on which he exercises his functions, a special allowance, provided that in any year the total sum payable to any member as special allowance shall not exceed the amount of the annual allowance.

2. The President shall receive a special annual allowance.

3. The Vice-President shall receive a special allowance for each day on which he acts as President.

4. The members chosen under article 17 of this Annex, other than elected members of the Tribunal, shall receive compensation for each day on which they exercise their functions.

5. The salaries, allowances and compensation shall be determined from time to time at meetings of the States Parties, taking into account the work load of the Tribunal. They may not be decreased during the term of office.

6. The salary of the Registrar shall be determined at meetings of the States Parties, on the proposal of the Tribunal.

7. Regulations adopted at meetings of the States Parties shall determine the conditions under which retirement pensions may be given to members of the Tribunal and to the Registrar, and the conditions under which members of the Tribunal and Registrar shall have their travelling expenses refunded.

8. The salaries, allowances, and compensation shall be free of all taxation.

Article 19

Expenses of the Tribunal

"1. The expenses of the Tribunal shall be borne by the States Parties and by the Authority on such terms and in such a manner as shall be decided at meetings of the States Parties.

2. When an entity other than a State Party or the Authority is a party to a case submitted to it, the Tribunal shall fix the amount which that party is to contribute towards the expenses of the Tribunal."

SECTION 2. COMPETENCE

Article 20

Access to the Tribunal

1. The Tribunal shall be open to States Parties.

2. The Tribunal shall be open to entities other than States Parties in any case expressly provided for in Part XI or in any case submitted pursuant to any other agreement conferring jurisdiction on the Tribunal which is accepted by all the parties to that case.

Article 21

Jurisdiction

The jurisdiction of the Tribunal comprises all disputes and all applications submitted to it in accordance with this Convention and all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal.

Article 22

Reference of disputes subject to other agreements

If all the parties to a treaty or convention already in force and concerning the subject-matter covered by this Convention so agree, any disputes concerning the interpretation or application of such treaty or convention may, in accordance with such agreement, be submitted to the Tribunal.

Article 23

Applicable law

The Tribunal shall decide all disputes and applications in accordance with article 293.
SECTION 3. PROCEEDINGS

Article 24
Institution of proceedings

1. Disputes are submitted to the Tribunal, as the case may be, either by notification of a special agreement or by written application, addressed to the Registrar. In either case, the subject of the dispute and the parties shall be indicated.

2. The Registrar shall forthwith notify the special agreement or the application to all concerned.

3. The Registrar shall also notify all States Parties.

Article 25
Provisional measures

1. In accordance with article 290, the Tribunal and its SEE-BED Disputes Chamber shall have the power to prescribe provisional measures.

2. If the Tribunal is not in session or a sufficient number of members is not available to constitute a quorum, the provisional measures shall be prescribed by the chamber of summary procedure formed under article 15, paragraph 3, of this Annex. Notwithstanding article 15, paragraph 4, of this Annex, such provisional measures may be adopted at the request of any party to the dispute. They shall be subject to review and revision by the Tribunal.

Article 26
Hearing

1. The hearing shall be under the control of the President or, if he is unable to preside, of the Vice-President. If neither is able to preside, the senior judge present of the Tribunal shall preside.

2. The hearing shall be public, unless the Tribunal decides otherwise or unless the parties demand that the public be not admitted.

Article 27
Conduct of case

The Tribunal shall make orders for the conduct of the case, decide the form and time in which each party must conclude its arguments, and make all arrangements connected with the taking of evidence.

Article 28
Default

When one of the parties does not appear before the Tribunal or fails to defend its case, the other party may request the Tribunal to continue the proceedings and make its decision. Absence of a party or failure of a party to defend its case shall not constitute a bar to the proceedings. Before making its decision, the Tribunal must satisfy itself not only that it has jurisdiction over the dispute, but also that the claim is well founded in fact and law.

Article 29
Majority for decision

1. All questions shall be decided by a majority of the members of the Tribunal who are present.

2. In the event of an equality of votes, the President or the member of the Tribunal who acts in his place shall have a casting vote.

Article 30
Judgment

1. The judgment shall state the reasons on which it is based.

2. It shall contain the names of the members of the Tribunal who have taken part in the decision.

3. If the judgment does not represent in whole or in part the unanimous opinion of the members of the Tribunal, any member shall be entitled to deliver a separate opinion.

4. The judgment shall be signed by the President and by the Registrar. It shall be read in open court, due notice having been given to the parties to the dispute.

Article 31
Request to intervene

1. Should a State Party consider that it has an interest of a legal nature which may be affected by the decision in any dispute, it may submit a request to the Tribunal to be permitted to intervene.

2. It shall be for the Tribunal to decide upon this request.

3. If a request to intervene is granted, the decision of the Tribunal in respect of the dispute shall be binding upon the intervening State Party in so far as it relates to matters in respect of which that State Party intervened.

Article 32
Right to intervene in cases of interpretation or application

1. Whenever the interpretation or application of this Convention is in question, the Registrar shall notify all States Parties forthwith.

2. Whenever pursuant to article 21 or 22 of this Annex the interpretation or application of an international agreement is in question, the Registrar shall notify all the parties to the agreement.

3. Every party referred to in paragraphs 1 and 2 has the right to intervene in the proceedings; if it uses this right, the interpretation given by the judgment will be equally binding upon it.

Article 33
Finality and binding force of decisions

1. The decision of the Tribunal is final and shall be complied with by all the parties to the dispute.
2. The decision shall have no binding force except between the parties in respect of that particular dispute.

3. In the event of dispute as to the meaning or scope of the decision, the Tribunal shall construe it upon the request of any party.

Article 34
Costs

Unless otherwise decided by the Tribunal, each party shall bear its own costs.

SECTION 4. SEA-BED DISPUTES CHAMBER

Article 35
Composition

1. The Sea-Bed Disputes Chamber referred to in article 14 of this Annex shall be composed of 11 members, selected by a majority of the elected members of the Tribunal from among them.

2. In the selection of the members of the Chamber, the representation of the principal legal systems of the world and equitable geographical distribution shall be assured. The Assembly of the Authority may adopt recommendations of a general nature relating to such representation and distribution.

3. The members of the Chamber shall be selected every three years and may be selected for a second term.

4. The Chamber shall elect its President from among its members, who shall serve for the term for which the Chamber has been selected.

5. If any proceedings are still pending at the end of any three-year period for which the Chamber has been selected, the Chamber shall complete the proceedings in its original composition.

6. If a vacancy occurs in the Chamber, the Tribunal shall select a successor from among its elected members, who shall hold office for the remainder of his predecessor's term.

7. A quorum of seven of the members selected by the Tribunal shall be required to constitute the Chamber.

Article 36
Ad Hoc Chambers

1. The Sea-Bed Disputes Chamber shall form an ad hoc Chamber, composed of three of its members, for dealing with a particular dispute submitted to it in accordance with article 188, paragraph 1(b). The composition of such a chamber shall be determined by the Sea-Bed Disputes Chamber with the approval of the parties.

2. If the parties do not agree on the composition of an ad hoc Chamber, each party to the dispute shall appoint one member, and the third member shall be appointed by them in agreement. If they disagree, or if any party fails to make an appointment, the President of the Sea-Bed Disputes Chamber shall promptly make the appointment or appointments from among its members, after consultation with the parties.

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3. Members of the ad hoc chamber must not be in the service of, or nationals of, any of the parties to the dispute.

Article 37
Access

The Chamber shall be open to the States Parties, the Authority and the other entities referred to in Part XII, section 5.

Article 38
Applicable law

In addition to the provisions of article 293, the Chamber shall apply
(a) the rules, regulations and procedures of the Authority adopted in accordance with this Convention; and
(b) the terms of contracts concerning activities in the Area in matters relating to those contracts.

Article 39
Enforcement of decisions of the Chamber

The decisions of the chamber shall be enforceable in the territories of the States Parties in the same manner as judgments or orders of the highest court of the State Party in whose territory the enforcement is sought.

Article 40
Applicability of other sections of this Annex

1. The other sections of this Annex which are not incompatible with this section apply to the Chamber.

2. In the exercise of its functions relating to advisory opinions, the Chamber shall be guided by the provisions of this Annex relating to procedure before the Tribunal to the extent to which it recognizes them to be applicable.

SECTION 5. AMENDMENTS

Article 41
Amendments

1. Amendments to this Annex, other than amendments to section 4, may be adopted only in accordance with article 313 or by consensus at a conference convened in accordance with this Convention.

2. Amendments to section 4 may be adopted only in accordance with article 314.

3. The Tribunal may propose such amendments to this Statute as it may consider necessary, by written communications to the States Parties for their consideration in conformity with paragraphs 1 and 2.
ANNEX VII. ARBITRATION

Article 1
Institution of proceedings

Subject to the provisions of Part XV, any party to a dispute may submit the dispute to the arbitral procedure provided for in this Annex by written notification addressed to the other party or parties to the dispute. The notification shall be accompanied by a statement of the claim and the grounds on which it is based.

Article 2
List of arbitrators

1. A list of arbitrators shall be drawn up and maintained by the Secretary-General of the United Nations. Every State Party shall be entitled to nominate four arbitrators, each of whom shall be a person experienced in maritime affairs and enjoying the highest reputation for fairness, competence and integrity. The names of the persons so nominated shall constitute the list.

2. If at any time the arbitrators nominated by a State Party in the list so constituted shall be fewer than four, that State Party shall be entitled to make further nominations as necessary.

3. The name of an arbitrator shall remain on the list until withdrawn by the State Party which made the nomination, provided that such arbitrator shall continue to serve on any arbitral tribunal to which that arbitrator has been appointed until the completion of the proceedings before that arbitral tribunal.

Article 3
Constitution of arbitral tribunal

For the purpose of proceedings under this Annex, the arbitral tribunal shall, unless the parties otherwise agree, be constituted as follows:

(a) Subject to subparagraph (g), the arbitral tribunal shall consist of five members.

(b) The party instituting the proceedings shall appoint one member to be chosen preferably from the list referred to in article 2 of this Annex, who may be its national. The appointment shall be included in the notification referred to in article 1 of this Annex.

(c) The other party to the dispute shall, within 30 days of receipt of the notification referred to in article 1 of this Annex, appoint one member to be chosen preferably from the list, who may be its national. If the appointment is not made within that period, the party instituting the proceedings may, within two weeks of the expiration of that period, request that the appointment be made in accordance with subparagraph (e).

(d) The other three members shall be appointed by agreement between the parties. They shall be chosen preferably from the list and shall be nationals of third States unless the parties otherwise agree. The parties to the dispute shall appoint the President of the arbitral tribunal from among those three members. If, within 60 days of receipt of the notification referred to in article 1 of this Annex, the parties are unable to reach agreement on the appointment of one or more of the members of the tribunal to be appointed by agreement, or on the appointment of the President, the remaining appointment or appointments shall be made in accordance with subparagraph (e), at the request of a party to the dispute. Such request shall be made within two weeks of the expiration of the aforementioned 60-day period.

(e) Unless the parties agree that any appointment under subparagraphs (c) and (d) be made by a person or a third State chosen by the parties, the President of the International Tribunal for the Law of the Sea shall make the necessary appointments. If the President is unable to act under this subparagraph or is a national of one of the parties to the dispute, the appointment shall be made by the next senior member of the International Tribunal for the Law of the Sea who is available and is not a national of one of the parties. The appointments referred to in this subparagraph shall be made from the list referred to in article 2 of this Annex within a period of 30 days of the receipt of the request and in consultation with the parties. The members so appointed shall be of different nationalities and may not be in the service of, ordinarily resident in the territory of, or nationals of, any of the parties to the dispute.

(f) Any vacancy shall be filled in the manner prescribed for the initial appointment.

(g) Parties in the same interest shall appoint one member of the tribunal jointly by agreement. Where there are several parties having separate interests or where there is disagreement as to whether they are of the same interest, each of them shall appoint one member of the tribunal. The number of members of the tribunal appointed separately by the parties shall always be smaller by one than the number of members of the tribunal to be appointed jointly by the parties.

(h) In disputes involving more than two parties, the provisions of subparagraphs (a) to (f) shall apply to the maximum extent possible.

Article 4
Functions of arbitral tribunal

An arbitral tribunal constituted under article 3 of this Annex shall function in accordance with this Annex and the other provisions of this Convention.
Article 5
Procedure

Unless the parties to the dispute otherwise agree, the arbitral tribunal shall determine its own procedure, assuring to each party a full opportunity to be heard and to present its case.

Article 6
Duties of parties to a dispute

The parties to the dispute shall facilitate the work of the arbitral tribunal and, in particular, in accordance with their law and using all means at their disposal, shall:

(a) provide it with all relevant documents, facilities and information; and

(b) enable it when necessary to call witnesses or experts and receive their evidence and to visit the localities to which the case relates.

Article 7
Expenses

Unless the arbitral tribunal decides otherwise because of the particular circumstances of the case, the expenses of the tribunal, including the remuneration of its members, shall be borne by the parties to the dispute in equal shares.

Article 8
Required majority for decisions

Decisions of the arbitral tribunal shall be taken by a majority vote of its members. The absence or abstention of less than half of the members shall not constitute a bar to the tribunal reaching a decision. In the event of an equality of votes, the President shall have a casting vote.

Article 9
Default of appearance

If one of the parties to the dispute does not appear before the arbitral tribunal or fails to defend its case, the other party may request the tribunal to continue the proceedings and to make its award. Absence of a party or failure of a party to defend its case shall not constitute a bar to the proceedings. Before making its award, the arbitral tribunal must satisfy itself not only that it has jurisdiction over the dispute but also that the claim is well founded in fact and law.

Article 10
Award

The award of the arbitral tribunal shall be confined to the subject-matter of the dispute and state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the award. Any member of the tribunal may attach a separate or dissenting opinion to the award.

Article 11
Finality of award

The award shall be final and without appeal, unless the parties to the dispute have agreed in advance to an appellate procedure. It shall be complied with by the parties to the dispute.

Article 12
Interpretation or implementation of award

1. Any controversy which may arise between the parties to the dispute as regards the interpretation or manner of implementation of the award may be submitted by either party for decision to the arbitral tribunal which made the award. For this purpose, any vacancy in the tribunal shall be filled in the manner provided for in the original appointments of the members of the tribunal.

2. Any such controversy may be submitted to another court or tribunal under article 287 by agreement of all the parties to the dispute.

Article 13
Application to entities other than States Parties

The provisions of this Annex shall apply mutatis mutandis to any dispute involving entities other than States Parties.
ANNEX VIII. SPECIAL ARBITRATION

Article 1
Institution of proceedings
Subject to Part XV, any party to a dispute concerning the interpretation or application of the articles of this Convention relating to (1) fisheries, (2) protection and preservation of the marine environment, (3) marine scientific research, or (4) navigation, including pollution from vessels and by dumping, may submit the dispute to the special arbitral procedure provided for in this Annex by written notification addressed to the other party or parties to the dispute. The notification shall be accompanied by a statement of the claim and the grounds on which it is based.

Article 2
Lists of experts
1. A list of experts shall be established and maintained in respect of each of the fields of (1) fisheries, (2) protection and preservation of the marine environment, (3) marine scientific research, and (4) navigation, including pollution from vessels and by dumping.

2. The lists of experts shall be drawn up and maintained, in the field of fisheries by the Food and Agriculture Organization of the United Nations, in the field of protection and preservation of the marine environment by the United Nations Environment Programme, in the field of marine scientific research by the Inter-Governmental Oceanographic Commission, in the field of navigation, including pollution from vessels and by dumping, by the International Maritime Organization, or in each case by the appropriate subsidiary body concerned to which such organization, programme or commission has delegated this function.

3. Every State Party shall be entitled to nominate two experts in each field whose competence in the legal, scientific or technical aspects of such field is established and generally recognized and who enjoy the highest reputation for fairness and integrity. The names of the persons so nominated in each field shall constitute the appropriate list.

4. If at any time the experts nominated by a State Party in the list so constituted shall be fewer than two, that State Party shall be entitled to make further nominations as necessary.

5. The name of an expert shall remain on the list until withdrawn by the State Party which made the nomination, provided that such expert shall continue to serve on any special arbitral tribunal to which that expert has been appointed until the completion of the proceedings before that special arbitral tribunal.

Article 3
Constitution of special arbitral tribunal
For the purpose of proceedings under this Annex, the special arbitral tribunal shall, unless the parties otherwise agree, be constituted as follows:

(a) Subject to subparagraph (g), the special arbitral tribunal shall consist of five members.

(b) The party instituting the proceedings shall appoint two members to be chosen preferably from the appropriate list or lists referred to in article 2 of this Annex relating to the matters in dispute, one of whom may be its national. The appointments shall be included in the notification referred to in article 1 of this Annex.

(c) The other party to the dispute shall, within 30 days of receipt of the notification referred to in article 1 of this Annex, appoint two members to be chosen preferably from the appropriate list or lists relating to the matters in dispute, one of whom may be its national. If the appointments are not made within that period, the party instituting the proceedings may, within two weeks of the expiration of that period, request that the appointments be made in accordance with subparagraph (e).

(d) The parties to the dispute shall by agreement appoint the President of the special arbitral tribunal, chosen preferably from the appropriate list, who shall be a national of a third State, unless the parties otherwise agree. If, within 30 days of receipt of the notification referred to in article 1 of this Annex, the parties are unable to reach agreement on the appointment of the President, the appointment shall be made in accordance with subparagraph (e), at the request of a party to the dispute. Such request shall be made within two weeks of the expiration of the aforementioned 30-day period.

(e) Unless the parties agree that the appointment be made by a person or a third State chosen by the parties, the Secretary-General of the United Nations shall make the necessary appointments within 30 days of receipt of a request under subparagraphs (c) and (d). The appointments referred to in this subparagraph shall be made from the appropriate list or lists of experts referred to in article 2 of this Annex and in consultation with the parties to the dispute and the appropriate international organization. The members so appointed shall be of different nationalities and may not be in the service of, ordinarily resident in the territory of, or nationals of, any of the parties to the dispute.

(f) Any vacancy shall be filled in the manner prescribed for the initial appointment.

(g) Parties in the same interest shall appoint two members of the tribunal jointly by agreement. Where there are several parties having separate interests or where there is disagreement as to whether they are of the same interest, each of them shall appoint one member of the tribunal.

(h) In disputes involving more than two parties, the provisions of subparagraphs (a) to (f) shall apply to the maximum extent possible.
Article 4
General provisions

Annex VII, articles 4 to 13, apply mutatis mutandis to the special arbitration proceedings in accordance with this Annex.

Article 5
Fact finding

1. The parties to a dispute concerning the interpretation or application of the provisions of this Convention relating to (1) fisheries, (2) protection and preservation of the marine environment, (3) marine scientific research, or (4) navigation, including pollution from vessels and by dumping, may at any time agree to request a special arbitral tribunal constituted in accordance with article 3 of this Annex to carry out an inquiry and establish the facts giving rise to the dispute.

2. Unless the parties otherwise agree, the findings of fact of the special arbitral tribunal sitting in accordance with paragraph 1, shall be considered as conclusive as between the parties.

3. If all the parties to the dispute so request, the special arbitral tribunal may formulate recommendations which, without having the force of a decision, shall only constitute the basis for a review by the parties of the questions giving rise to the dispute.

4. Subject to paragraph 2, the special arbitral tribunal shall act in accordance with the provisions of this Annex, unless the parties otherwise agree.

ANNEX IX. PARTICIPATION BY INTERNATIONAL ORGANIZATIONS

Article 1
Use of terms

For the purposes of article 305 and of this Annex, "international organization" means an intergovernmental organization constituted by States to which its member States have transferred competence over matters governed by this Convention, including the competence to enter into treaties in respect of those matters.

Article 2
Signature

An international organization may sign this Convention if a majority of its member States are signatories to this Convention. At the time of signature an international organization shall make a declaration specifying the matters governed by this Convention in respect of which competence has been transferred to that organization by its member States which are signatories, and the nature and extent of that competence.

Article 3
Formal confirmation and accession

1. An international organization may deposit its instrument of formal confirmation or of accession if a majority of its member States deposit or have deposited their instruments of ratification or accession.

2. The instruments deposited by the international organization shall contain the undertakings and declarations required by articles 4 and 5 of this Annex.

Article 4
Extent of participation and rights and obligations

1. The instrument of formal confirmation or of accession of an international organization shall contain an undertaking to accept the rights and obligations of States under this Convention in respect of matters relating to which competence has been transferred to it by its member States which are Parties to this Convention.

2. An international organization shall be a Party to this Convention to the extent that it has competence in accordance with the declarations, communications of information or notifications referred to in article 5 of this Annex.

3. Such an international organization shall exercise the rights and perform the obligations which its member States which are Parties would otherwise have under this Convention, on matters relating to which competence has been transferred to it by those member States. The member States of that international organization shall not exercise competence which they have transferred to it.
4. Participation of such an international organization shall in no case entail an increase of the representation to which its member States which are States Parties would otherwise be entitled, including rights in decision-making.

5. Participation of such an international organization shall in no case confer any rights under this Convention on member States of the organization which are not States Parties to this Convention.

6. In the event of a conflict between the obligations of an international organization under this Convention and its obligations under the agreement establishing the organization or any acts relating to it, the obligations under this Convention shall prevail.

**Article 5**

**Declarations, notifications and communications**

1. The instrument of formal confirmation or of accession of an international organization shall contain a declaration specifying the matters governed by this Convention in respect of which competence has been transferred to the organization by its member States which are Parties to this Convention.

2. A member State of an international organization shall, at the time it ratifies or accedes to this Convention or at the time when the organization deposits its instrument of formal confirmation or of accession, whichever is later, make a declaration specifying the matters governed by this Convention in respect of which it has transferred competence to the organization.

3. States Parties which are member States of an international organization which is a Party to this Convention shall be presumed to have competence over all matters governed by this Convention in respect of which transfers of competence to the organization have not been specifically declared, notified or communicated by those States under this article.

4. The international organization and its member States which are States Parties shall promptly notify the depositary of this Convention of any changes to the distribution of competence, including new transfers of competence, specified in the declarations under paragraphs 1 and 2.

5. Any State Party may request an international organization and its member States which are States Parties to provide information as to which, as between the organization and its member States, has competence in respect of any specific question which has arisen. The organization and the member States concerned shall provide this information within a reasonable time. The international organization and the member States may also, on their own initiative, provide this information.

6. Declarations, notifications and communications of information under this article shall specify the nature and extent of the competence transferred.

**Article 6**

**Responsibility and liability**

1. Parties which have competence under article 5 of this Annex shall have responsibility for failure to comply with obligations or for any other violation of this Convention.

2. Any State Party may request an international organization or its member States which are States Parties for information as to who has responsibility in respect of any specific matter. The organization and the member States concerned shall provide this information. Failure to provide this information within a reasonable time or the provision of contradictory information shall result in joint and several liability.

**Article 7**

**Settlement of disputes**

1. At the time of deposit of its instrument of formal confirmation or of accession, or at any time thereafter, an international organization shall be free to choose, by means of a written declaration, one or more of the means for the settlement of disputes concerning the interpretation or application of this Convention, referred to in article 287, paragraph 1(a), (c) or (d).

2. Part XV applies mutatis mutandis to any dispute between Parties to this Convention, one or more of which are international organizations.

3. When an international organization and one or more of its member States are joint parties to a dispute, or parties in the same interest, the organization shall be deemed to have accepted the same procedures for the settlement of disputes as the member States; when, however, a member State has chosen only the International Court of Justice under article 287, the organization and the member State concerned shall be deemed to have accepted arbitration in accordance with Annex VII, unless the parties to the dispute otherwise agree.

**Article 8**

**Applicability of Part XVII**

Part XVII applies mutatis mutandis to an international organization, except in respect of the following:

(a) the instrument of formal confirmation or of accession of an international organization shall not be taken into account in the application of article 308, paragraph 1;

(b) (i) an international organization shall have exclusive capacity with respect to the application of articles 312 to 315, to the extent that it has competence under article 5 of this Annex over the entire subject-matter of the amendments; (ii) the instrument of formal confirmation or of accession of an international organization to an amendment, the entire subject-matter over which the international organization has competence under article 5 of this Annex, shall be considered to be the instrument of ratification or accession of each of the member States which are States Parties, for the purposes of applying article 316, paragraphs 1, 2 and 3;
(ii) The instrument of formal confirmation or of accession of the international organization shall not be taken into account in the application of article 316, paragraphs 1 and 2, with regard to all other amendments;

(iii) An international organization may not denounce this Convention in accordance with article 317 if any of its member States is a State Party and if it continues to fulfill the qualifications specified in article 1 of this Annex;

(iii) An international organization shall denounce this Convention when none of its member States is a State Party or if the international organization no longer fulfills the qualifications specified in article 1 of this Annex. Such denunciation shall take effect immediately.
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No. 31364

MULTILATERAL

Agreement relating to the implementation of Part XI of the
United Nations Convention on the Law of the Sea of
10 December 1982 (with annex). Adopted by the General
Assembly of the United Nations on 28 July 1994

Authentic texts: Arabic, Chinese, English, French, Russian and Spanish.
Registered ex officio on 16 November 1994.

MULTILATÉRAL

Accord relatif à l'application de la Partie XI de la Convention
des Nations Unies sur le droit de la mer du 10 décembre
1982 (avec annexe). Adopté par l'Assemblée générale des
Nations Unies le 28 juillet 1994

Textes authentiques : arabe, chinois, anglais, français, russe et espagnol.
Enregistré d'office le 16 novembre 1994.
AGREEMENT RELATING TO THE IMPLEMENTATION OF PART XI OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA OF 10 DECEMBER 1982

The States Parties to this Agreement,

Recognizing the important contribution of the United Nations Convention on the Law of the Sea of 10 December 1982 (hereinafter referred to as "the Convention") to the maintenance of peace, justice and progress for all peoples of the world,

Reaffirming that the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction (hereinafter referred to as "the Area"), as well as the resources of the Area, are the common heritage of mankind,

Mindful of the importance of the Convention for the protection and preservation of the marine environment and of the growing concern for the global environment,

Having considered the report of the Secretary-General of the United Nations on the results of the informal consultations among States held from 1990 to 1994 on outstanding issues relating to Part XI and related provisions of the Convention (hereinafter referred to as "Part XI"),

Noting the political and economic changes, including market-oriented approaches, affecting the implementation of Part XI,

Wishing to facilitate universal participation in the Convention,

Considering that an agreement relating to the implementation of Part XI would best meet that objective,

Have agreed as follows:

Implementation of Part XI

1. The States Parties to this Agreement undertake to implement Part XI in accordance with this Agreement.

2. The Annex forms an integral part of this Agreement.

(Continued on page 42)
Article 2

Relationship between this Agreement and Part XI

1. The provisions of this Agreement and Part XI shall be interpreted and applied together as a single instrument. In the event of any inconsistency between this Agreement and Part XI, the provisions of this Agreement shall prevail.

2. Articles 309 to 319 of the Convention shall apply to this Agreement as they apply to the Convention.

Article 3

Signature

This Agreement shall remain open for signature at United Nations Headquarters by the States and entities referred to in article 305, paragraph 1 (a), (c), (d), (e) and (f), of the Convention for 12 months from the date of its adoption.

Article 4

Consent to be bound

1. After the adoption of this Agreement, any instrument of ratification or formal confirmation of or accession to the Convention shall also represent consent to be bound by this Agreement.

2. No State or entity may establish its consent to be bound by this Agreement unless it has previously established or establishes at the same time its consent to be bound by the Convention.

3. A State or entity referred to in article 3 may express its consent to be bound by this Agreement by:

(a) Signature not subject to ratification, formal confirmation or the procedure set out in article 5;

(b) Signature subject to ratification or formal confirmation, followed by ratification or formal confirmation;

(c) Signature subject to the procedure set out in article 5; or

(d) Accession.

4. Formal confirmation by the entities referred to in article 305, paragraph 1 (f), of the Convention shall be in accordance with Annex IX of the Convention.

5. The instruments of ratification, formal confirmation or accession shall be deposited with the Secretary-General of the United Nations.

Article 5

Simplified procedure

1. A State or entity which has deposited before the date of the adoption of this Agreement an instrument of ratification or formal confirmation of or accession to the Convention and which has signed this Agreement in accordance with article 4, paragraph 3 (c), shall be considered to have established its consent to be bound by this Agreement 12 months after the date of its adoption, unless that State or entity notifies the depositary in writing before that date that it is not availing itself of the simplified procedure set out in this article.

2. In the event of such notification, consent to be bound by this Agreement shall be established in accordance with article 4, paragraph 3 (b).

Article 6

Entry into force

1. This Agreement shall enter into force 30 days after the date on which 40 States have established their consent to be bound in accordance with articles 4 and 5, provided that such States include at least seven of the States referred to in paragraph 1 (a) of resolution II of the Third United Nations Conference on the Law of the Sea (hereinafter referred to as "resolution II") and that at least five of those States are developed States. If these conditions for entry into force are fulfilled before 16 November 1994, this Agreement shall enter into force on 16 November 1994.
2. For each State or entity establishing its consent to be bound by this Agreement after the requirements set out in paragraph 1 have been fulfilled, this Agreement shall enter into force on the thirtieth day following the date of establishment of its consent to be bound.

Article 7

Provisional application

1. If on 16 November 1994 this Agreement has not entered into force, it shall be applied provisionally pending its entry into force by:

(a) States which have consented to its adoption in the General Assembly of the United Nations, except any such State which before 16 November 1994 notifies the depositary in writing either that it will not so apply this Agreement or that it will consent to such application only upon subsequent signature or notification in writing;

(b) States and entities which sign this Agreement, except any such State or entity which notifies the depositary in writing at the time of signature that it will not so apply this Agreement;

(c) States and entities which consent to its provisional application by so notifying the depositary in writing;

(d) States which accede to this Agreement.

2. All such States and entities shall apply this Agreement provisionally in accordance with their national or internal laws and regulations, with effect from 16 November 1994 or the date of signature, notification of consent or accession, if later.

3. Provisional application shall terminate upon the date of entry into force of this Agreement. In any event, provisional application shall terminate on 16 November 1998 if at that date the requirement in article 6, paragraph 1, of consent to be bound by this Agreement by at least seven of the States (of which at least five must be developed States) referred to in paragraph 1 (a) of resolution II has not been fulfilled.

Article 8

States Parties

1. For the purposes of this Agreement, "States Parties" means States which have consented to be bound by this Agreement and for which this Agreement is in force.

2. This Agreement applies mutatis mutandis to the entities referred to in article 305, paragraph 1 (c), (d), (e) and (f), of the Convention which become Parties to this Agreement in accordance with the conditions relevant to each, and to that extent "States Parties" refers to those entities.

Article 9

Depository

The Secretary-General of the United Nations shall be the depositary of this Agreement.

Article 10

Authentic texts

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF, the undersigned Plenipotentiaries, being duly authorized thereto, have signed this Agreement.

DONE AT NEW YORK, this 28 day of July, one thousand nine hundred and ninety-four.

[For the signatures, see p. 132 of this volume.]
ANNEX

SECTION 1. COSTS TO STATES PARTIES AND INSTITUTIONAL ARRANGEMENTS

1. The International Seabed Authority (hereinafter referred to as "the Authority") is the organization through which States Parties to the Convention shall, in accordance with the regime for the Area established in Part XI and this Agreement, organize and control activities in the Area, particularly with a view to administering the resources of the Area. The powers and functions of the Authority shall be those expressly conferred upon it by the Convention. The Authority shall have such incidental powers, consistent with the Convention, as are implicit in, and necessary for, the exercise of those powers and functions with respect to activities in the Area.

2. In order to minimize costs to States Parties, all organs and subsidiary bodies to be established under the Convention and this Agreement shall be cost-effective. This principle shall also apply to the frequency, duration and scheduling of meetings.

3. The setting up and the functioning of the organs and subsidiary bodies of the Authority shall be based on an evolutionary approach, taking into account the functional needs of the organs and subsidiary bodies concerned in order that they may discharge effectively their respective responsibilities at various stages of the development of activities in the Area.

4. The early functions of the Authority upon entry into force of the Convention shall be carried out by the Assembly, the Council, the Secretariat, the Legal and Technical Commission and the Finance Committee. The functions of the Economic Planning Commission shall be performed by the Legal and Technical Commission until such time as the Council decides otherwise or until the approval of the first plan of work for exploitation.

5. Between the entry into force of the Convention and the approval of the first plan of work for exploitation, the Authority shall concentrate on:

   (a) Processing of applications for approval of plans of work for exploration in accordance with Part XI and this Agreement;

   (b) Implementation of decisions of the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea (hereinafter referred to as "the Preparatory Commission") relating to the registered pioneer investors and their certifying States, including their rights and obligations, in accordance with article 308, paragraph 5, of the Convention and resolution II, paragraph 13:

   (c) Monitoring of compliance with plans of work for exploration approved in the form of contracts;

   (d) Monitoring and review of trends and developments relating to deep seabed mining activities, including regular analysis of world metal market conditions and metal prices, trends and prospects;

   (e) Study of the potential impact of mineral production from the Area on the economies of developing land-based producers of those minerals which are likely to be most seriously affected, with a view to minimizing their difficulties and assisting them in their economic adjustment, taking into account the work done in this regard by the Preparatory Commission;

   (f) Adoption of rules, regulations and procedures necessary for the conduct of activities in the Area as they progress. Notwithstanding the provisions of Annex III, article 17, paragraph 2 (b) and (c), of the Convention, such rules, regulations and procedures shall take into account the terms of this Agreement, the prolonged delay in commercial deep seabed mining and the likely pace of activities in the Area;

   (g) Adoption of rules, regulations and procedures incorporating applicable standards for the protection and preservation of the marine environment;

   (h) Promotion and encouragement of the conduct of marine scientific research with respect to activities in the Area and the collection and dissemination of the results of such research and analysis, when available, with particular emphasis on research related to the environmental impact of activities in the Area;

   (i) Acquisition of scientific knowledge and monitoring of the development of marine technology relevant to activities in the Area, in particular technology relating to the protection and preservation of the marine environment;
(j) Assessment of available data relating to prospecting and exploration;

(k) Timely elaboration of rules, regulations and procedures for exploitation, including those relating to the protection and preservation of the marine environment.

6. (a) An application for approval of a plan of work for exploration shall be considered by the Council following the receipt of a recommendation on the application from the Legal and Technical Commission. The processing of an application for approval of a plan of work for exploration shall be in accordance with the provisions of the Convention, including Annex III thereof, and this Agreement, and subject to the following:

(i) A plan of work for exploration submitted on behalf of a State or entity, or any component of such entity, referred to in resolution II, paragraph 1 (a) (i) or (ii), other than a registered pioneer investor, which had already undertaken substantial activities in the Area prior to the entry into force of the Convention, or its successor in interest, shall be considered to have met the financial and technical qualifications necessary for approval of a plan of work if the sponsoring State or States certify that the applicant has expended an amount equivalent to at least US$ 30 million in research and exploration activities and has expended no less than 10 per cent of that amount in the location, survey and evaluation of the area referred to in the plan of work. If the plan of work otherwise satisfies the requirements of the Convention and any rules, regulations and procedures adopted pursuant thereto, it shall be approved by the Council in the form of a contract. The provisions of section 3, paragraph 11, of this Annex shall be interpreted and applied accordingly;

(ii) Notwithstanding the provisions of resolution II, paragraph 8 (a), a registered pioneer investor may request approval of a plan of work for exploration within 36 months of the entry into force of the Convention. The plan of work for exploration shall consist of documents, reports and other data submitted to the Preparatory Commission both before and after registration and shall be accompanied by a certificate of compliance, consisting of a factual report describing the status of fulfillment of obligations under the pioneer investor regime, issued by the Preparatory Commission in accordance with resolution II, paragraph 11 (a). Such a plan of work shall be considered to be approved. Such an approved plan of work shall be in the form of a contract concluded between the Authority and the registered pioneer investor in accordance with Part XI and this Agreement. The fee of US$ 250,000 paid pursuant to resolution II, paragraph 7 (a), shall be deemed to be the fee relating to the exploration phase pursuant to section 8, paragraph 3, of this Annex. Section 3, paragraph 11, of this Annex shall be interpreted and applied accordingly;

(iii) In accordance with the principle of non-discrimination, a contract with a State or entity or any component of such entity referred to in subparagraph (a) (i) shall include arrangements which shall be similar to and no less favourable than those agreed with any registered pioneer investor referred to in subparagraph (a) (ii). If any of the States or entities or any components of such entities referred to in subparagraph (a) (i) are granted more favourable arrangements, the Council shall make similar and no less favourable arrangements with regard to the rights and obligations assumed by the registered pioneer investors referred to in subparagraph (a) (ii), provided that such arrangements do not affect or prejudice the interests of the Authority;

(iv) A State sponsoring an application for a plan of work pursuant to the provisions of subparagraph (a) (i) or (ii) may be a State Party or a State which is applying this Agreement provisionally in accordance with article 7, or a State which is a member of the Authority on a provisional basis in accordance with paragraph 12;

(v) Resolution II, paragraph 8 (c), shall be interpreted and applied in accordance with subparagraph (a) (iv).

(b) The approval of a plan of work for exploration shall be in accordance with article 153, paragraph 3, of the Convention.

7. An application for approval of a plan of work shall be accompanied by an assessment of the potential environmental impacts of the proposed activities and by a description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the Authority.
8. An application for approval of a plan of work for exploration, subject to paragraph 6 (a) (i) or (ii), shall be processed in accordance with the procedures set out in section 3, paragraph 11, of this Annex.

9. A plan of work for exploration shall be approved for a period of 15 years. Upon the expiration of a plan of work for exploration, the contractor shall apply for a plan of work for exploitation unless the contractor has already done so or has obtained an extension for the plan of work for exploration. Contractors may apply for such extensions for periods of not more than five years each. Such extensions shall be approved if the contractor has made efforts in good faith to comply with the requirements of the plan of work but for reasons beyond the contractor's control has been unable to complete the necessary preparatory work for proceeding to the exploitation stage or if the prevailing economic circumstances do not justify proceeding to the exploitation stage.

10. Designation of a reserved area for the Authority in accordance with Annex III, article 8, of the Convention shall take place in connection with approval of an application for a plan of work for exploration or approval of an application for a plan of work for exploration and exploitation.

11. Notwithstanding the provisions of paragraph 9, an approved plan of work for exploration which is sponsored by at least one State provisionally applying this Agreement shall terminate if such a State ceases to apply this Agreement provisionally and has not become a member on a provisional basis in accordance with paragraph 12 or has not become a State Party.

12. Upon the entry into force of this Agreement, States and entities referred to in article 3 of this Agreement which have been applying it provisionally in accordance with article 7 and for which it is not in force may continue to be members of the Authority on a provisional basis pending its entry into force for such States and entities, in accordance with the following subparagraphs:

(a) If this Agreement enters into force before 16 November 1996, such States and entities shall be entitled to continue to participate as members of the Authority on a provisional basis upon notification to the depositary of the Agreement by such a State or entity of its intention to participate as a member on a provisional basis. Such membership shall terminate either on 16 November 1996 or upon the entry into force of this Agreement and the Convention for such member, whichever is earlier. The Council may, upon the request of the State or entity concerned, extend such membership beyond 16 November 1996 for a further period or periods not exceeding a total of two years provided that the Council is satisfied that the State or entity concerned has been making efforts in good faith to become a party to the Agreement and the Convention;

(b) If this Agreement enters into force after 15 November 1996, such States and entities may request the Council to grant continued membership in the Authority on a provisional basis for a period or periods not extending beyond 16 November 1998. The Council shall grant such membership with effect from the date of the request if it is satisfied that the State or entity has been making efforts in good faith to become a party to the Agreement and the Convention;

(c) States and entities which are members of the Authority on a provisional basis in accordance with subparagraph (a) or (b) shall apply the terms of Part XI and this Agreement in accordance with their national or internal laws, regulations and annual budgetary appropriations and shall have the same rights and obligations as other members, including:

(i) The obligation to contribute to the administrative budget of the Authority in accordance with the scale of assessed contributions;

(ii) The right to sponsor an application for approval of a plan of work for exploration. In the case of entities whose components are natural or juridical persons possessing the nationality of more than one State, a plan of work for exploration shall not be approved unless all the States whose natural or juridical persons comprise those entities are States Parties or members on a provisional basis;

(d) Notwithstanding the provisions of paragraph 9, an approved plan of work in the form of a contract for exploration which was sponsored pursuant to subparagraph (c) (ii) by a State which was a member on a provisional basis shall terminate if such membership ceases and the State or entity has not become a State Party;

(e) If such a member has failed to make its assessed contributions or otherwise failed to comply with its obligations in accordance with this paragraph, its membership on a provisional basis shall be terminated.
13. The reference in Annex III, article 10, of the Convention to performance which has not been satisfactory shall be interpreted to mean that the contractor has failed to comply with the requirements of an approved plan of work in spite of a written warning or warnings from the Authority to the contractor to comply therewith.

14. The Authority shall have its own budget. Until the end of the year following the year during which this Agreement enters into force, the administrative expenses of the Authority shall be met through the budget of the United Nations. Thereafter, the administrative expenses of the Authority shall be met by assessed contributions of its members, including any members on a provisional basis, in accordance with articles 171, subparagraph (a), and 173 of the Convention and this Agreement, until the Authority has sufficient funds from other sources to meet those expenses. The Authority shall not exercise the power referred to in article 174, paragraph 1, of the Convention to borrow funds to finance its administrative budget.

15. The Authority shall elaborate and adopt, in accordance with article 162, paragraph 2 (c) (ii), of the Convention, rules, regulations and procedures based on the principles contained in sections 2, 5, 6, 7 and 8 of this Annex, as well as any additional rules, regulations and procedures necessary to facilitate the approval of plans of work for exploration or exploitation, in accordance with the following subparagraphs:

(a) The Council may undertake such elaboration any time it deems that all or any of such rules, regulations or procedures are required for the conduct of activities in the Area, or when it determines that commercial exploitation is imminent, or at the request of a State whose national intends to apply for approval of a plan of work for exploitation;

(b) If a request is made by a State referred to in subparagraph (a) the Council shall, in accordance with article 162, paragraph 2 (a), of the Convention, complete the adoption of such rules, regulations and procedures within two years of the request;

(c) If the Council has not completed the elaboration of the rules, regulations and procedures relating to exploitation within the prescribed time and an application for approval of a plan of work for exploitation is pending, it shall none the less consider and provisionally approve such plan of work based on the provisions of the Convention and any rules, regulations and procedures that the Council may have adopted provisionally, or on the basis of the norms contained in the Convention and the terms and principles contained in this Annex as well as the principle of non-discrimination among contractors.

16. The draft rules, regulations and procedures and any recommendations relating to the provisions of Part XI, as contained in the reports and recommendations of the Preparatory Commission, shall be taken into account by the Authority in the adoption of rules, regulations and procedures in accordance with Part XI and this Agreement.

17. The relevant provisions of Part XI, section 4, of the Convention shall be interpreted and applied in accordance with this Agreement.

SECTION 2. THE ENTERPRISE

1. The Secretariat of the Authority shall perform the functions of the Enterprise until it begins to operate independently of the Secretariat. The Secretary-General of the Authority shall appoint from within the staff of the Authority an interim Director-General to oversee the performance of these functions by the Secretariat.

These functions shall be:

(a) Monitoring and review of trends and developments relating to deep seabed mining activities, including regular analysis of world metal market conditions and metal prices, trends and prospects;

(b) Assessment of the results of the conduct of marine scientific research with respect to activities in the Area, with particular emphasis on research related to the environmental impact of activities in the Area;

(c) Assessment of available data relating to prospecting and exploration, including the criteria for such activities;

(d) Assessment of technological developments relevant to activities in the Area, in particular technology relating to the protection and preservation of the marine environment;

(e) Evaluation of information and data relating to areas reserved for the Authority;

(f) Assessment of approaches to joint-venture operations;

(g) Collection of information on the availability of trained manpower;
(h) Study of managerial policy options for the administration of the Enterprise at different stages of its operations.

2. The Enterprise shall conduct its initial deep seabed mining operations through joint ventures. Upon the approval of a plan of work for exploitation for an entity other than the Enterprise, or upon receipt by the Council of an application for a joint-venture operation with the Enterprise, the Council shall take up the issue of the functioning of the Enterprise independently of the Secretariat of the Authority. If joint-venture operations with the Enterprise accord with sound commercial principles, the Council shall issue a directive pursuant to article 170, paragraph 2, of the Convention providing for such independent functioning.

3. The obligation of States Parties to fund one mine site of the Enterprise as provided for in Annex IV, article 11, paragraph 3, of the Convention shall not apply and States Parties shall be under no obligation to finance any of the operations in any mine site of the Enterprise or under its joint-venture arrangements.

4. The obligations applicable to contractors shall apply to the Enterprise. Notwithstanding the provisions of article 153, paragraph 3, and Annex III, article 3, paragraph 5, of the Convention, a plan of work for the Enterprise upon its approval shall be in the form of a contract concluded between the Authority and the Enterprise.

5. A contractor which has contributed a particular area to the Authority as a reserved area has the right of first refusal to enter into a joint-venture arrangement with the Enterprise for exploration and exploitation of that area. If the Enterprise does not submit an application for a plan of work for activities in respect of such a reserved area within 15 years of the commencement of its functions independent of the Secretariat of the Authority or within 15 years of the date on which that area is reserved for the Authority, whichever is the later, the contractor which contributed the area shall be entitled to apply for a plan of work for that area provided it offers in good faith to include the Enterprise as a joint-venture partner.

6. Article 170, paragraph 4, Annex IV and other provisions of the Convention relating to the Enterprise shall be interpreted and applied in accordance with this section.

SECTION 3. DECISION-MAKING

1. The general policies of the Authority shall be established by the Assembly in collaboration with the Council.

2. As a general rule, decision-making in the organs of the Authority should be by consensus.

3. If all efforts to reach a decision by consensus have been exhausted, decisions by voting in the Assembly on questions of procedure shall be taken by a majority of members present and voting, and decisions on questions of substance shall be taken by a two-thirds majority of members present and voting, as provided for in article 159, paragraph 8, of the Convention.

4. Decisions of the Assembly on any matter for which the Council also has competence or on any administrative, budgetary or financial matter shall be based on the recommendations of the Council. If the Assembly does not accept the recommendation of the Council on any matter, it shall return the matter to the Council for further consideration. The Council shall reconsider the matter in the light of the views expressed by the Assembly.

5. If all efforts to reach a decision by consensus have been exhausted, decisions by voting in the Council on questions of procedure shall be taken by a majority of members present and voting, and decisions on questions of substance, except where the Convention provides for decisions by consensus in the Council, shall be taken by a two-thirds majority of members present and voting, provided that such decisions are not opposed by a majority in any one of the chambers referred to in paragraph 9. In taking decisions the Council shall seek to promote the interests of all the members of the Authority.

6. The Council may defer the taking of a decision in order to facilitate further negotiation whenever it appears that all efforts at achieving consensus on a question have not been exhausted.

7. Decisions by the Assembly or the Council having financial or budgetary implications shall be based on the recommendations of the Finance Committee.

8. The provisions of article 161, paragraph 8 (b) and (c), of the Convention shall not apply.
9. (a) Each group of States elected under paragraph 15 (a) to (c) shall be treated as a chamber for the purposes of voting in the Council. The developing States elected under paragraph 15 (d) and (e) shall be treated as a single chamber for the purposes of voting in the Council.

(b) Before electing the members of the Council, the Assembly shall establish lists of countries fulfilling the criteria for membership in the groups of States in paragraph 15 (a) to (d). If a State fulfills the criteria for membership in more than one group, it may only be proposed by one group for election to the Council and it shall represent only that group in voting in the Council.

10. Each group of States in paragraph 15 (a) to (d) shall be represented in the Council by those members nominated by that group. Each group shall nominate only as many candidates as the number of seats required to be filled by that group. When the number of potential candidates in each of the groups referred to in paragraph 15 (a) to (e) exceeds the number of seats available in each of those respective groups, as a general rule, the principle of rotation shall apply. States members of each of those groups shall determine how this principle shall apply in those groups.

11. (a) The Council shall approve a recommendation by the Legal and Technical Commission for approval of a plan of work unless by a two-thirds majority of its members present and voting, including a majority of members present and voting in each of the chambers of the Council, the Council decides to disapprove a plan of work. If the Council does not take a decision on a recommendation for approval of a plan of work within a prescribed period, the recommendation shall be deemed to have been approved by the Council at the end of that period. The prescribed period shall normally be 60 days unless the Council decides to provide for a longer period. If the Commission recommends the disapproval of a plan of work or does not make a recommendation, the Council may nevertheless approve the plan of work in accordance with its rules of procedure for decision-making on questions of substance.

(b) The provisions of article 162, paragraph 2 (j), of the Convention shall not apply.

12. Where a dispute arises relating to the disapproval of a plan of work, such dispute shall be submitted to the dispute settlement procedures set out in the Convention.

13. Decisions by voting in the Legal and Technical Commission shall be by a majority of members present and voting.

14. Part XI, section 4, subsections B and C, of the Convention shall be interpreted and applied in accordance with this section.

15. The Council shall consist of 36 members of the Authority elected by the Assembly in the following order:

(a) Four members from among those States Parties which, during the last five years for which statistics are available, have either consumed more than 2 per cent in value terms of total world consumption or have had net imports of more than 2 per cent in value terms of total world imports of the commodities produced from the categories of minerals to be derived from the Area, provided that the four members shall include one State from the Eastern European region having the largest economy in that region in terms of gross domestic product and the State, on the date of entry into force of the Convention, having the largest economy in terms of gross domestic product, if such States wish to be represented in this group;

(b) Four members from among the eight States Parties which have made the largest investments in preparation for and in the conduct of activities in the Area, either directly or through their nationals;

(c) Four members from among States Parties which, on the basis of production in areas under their jurisdiction, are major net exporters of the categories of minerals to be derived from the Area, including at least two developing States whose exports of such minerals have a substantial bearing upon their economies;

(d) Six members from among developing States Parties, representing special interests. The special interests to be represented shall include those of States with large populations, States which are land-locked or geographically disadvantaged, island States, States which are major importers of the categories of minerals to be derived from the Area, States which are potential producers of such minerals and least developed States;

(e) Eighteen members elected according to the principle of ensuring an equitable geographical distribution of seats in the Council as a whole, provided that each geographical region shall have at least one member elected under this subparagraph. For this purpose, the geographical regions shall be Africa, Asia, Eastern Europe, Latin America and the Caribbean and Western Europe and Others.

16. The provisions of article 161, paragraph 1, of the Convention shall not apply.
SECTION 4. REVIEW CONFERENCE

The provisions relating to the Review Conference in article 155, paragraphs 1, 3 and 4, of the Convention shall not apply. Notwithstanding the provisions of article 314, paragraph 2, of the Convention, the Assembly, on the recommendation of the Council, may undertake at any time a review of the matters referred to in article 155, paragraph 1, of the Convention. Amendments relating to this Agreement and Part XI shall be subject to the procedures contained in articles 314, 315 and 316 of the Convention, provided that the principles, regime and other terms referred to in article 155, paragraph 2, of the Convention shall be maintained and the rights referred to in paragraph 5 of that article shall not be affected.

SECTION 5. TRANSFER OF TECHNOLOGY

1. In addition to the provisions of article 144 of the Convention, transfer of technology for the purposes of Part XI shall be governed by the following principles:

(a) The Enterprise, and developing States wishing to obtain deep seabed mining technology, shall seek to obtain such technology on fair and reasonable commercial terms and conditions on the open market, or through joint-venture arrangements;

(b) If the Enterprise or developing States are unable to obtain deep seabed mining technology, the Authority may request all or any of the contractors and their respective sponsoring State or States to cooperate with it in facilitating the acquisition of deep seabed mining technology by the Enterprise or its joint venture, or by a developing State or States seeking to acquire such technology on fair and reasonable commercial terms and conditions, consistent with the effective protection of intellectual property rights. States Parties undertake to cooperate fully and effectively with the Authority for this purpose and to ensure that contractors sponsored by them also cooperate fully with the Authority;

(c) As a general rule, States Parties shall promote international technical and scientific cooperation with regard to activities in the Area either between the parties concerned or by developing training, technical assistance and scientific cooperation programmes in marine science and technology and the protection and preservation of the marine environment.

2. The provisions of Annex III, article 5, of the Convention shall not apply.

SECTION 6. PRODUCTION POLICY

1. The production policy of the Authority shall be based on the following principles:

(a) Development of the resources of the Area shall take place in accordance with sound commercial principles;

(b) The provisions of the General Agreement on Tariffs and Trade, its relevant codes and successor or superseding agreements shall apply with respect to activities in the Area;

(c) In particular, there shall be no subsidization of activities in the Area except as may be permitted under the agreements referred to in subparagraph (b). Subsidization for the purpose of these principles shall be defined in terms of the agreements referred to in subparagraph (b);

(d) There shall be no discrimination between minerals derived from the Area and from other sources. There shall be no preferential access to markets for such minerals or for imports of commodities produced from such minerals, in particular:

(i) By the use of tariff or non-tariff barriers; and

(ii) Given by States Parties to such minerals or commodities produced by their state enterprises or by natural or juridical persons which possess their nationality or are controlled by them or their nationals;

(e) The plan of work for exploitation approved by the Authority in respect of each mining area shall indicate an anticipated production schedule which shall include the estimated maximum amounts of minerals that would be produced per year under the plan of work;

(f) The following shall apply to the settlement of disputes concerning the provisions of the agreements referred to in subparagraph (b):

(i) Where the States Parties concerned are parties to such agreements, they shall have recourse to the dispute settlement procedures of those agreements;
resulting from a reduction in the price of an affected mineral or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area, shall be based on the following principles:

(a) The Authority shall establish an economic assistance fund from a portion of the funds of the Authority which exceeds those necessary to cover the administrative expenses of the Authority. The amount set aside for this purpose shall be determined by the Council from time to time, upon the recommendation of the Finance Committee. Only funds from payments received from contractors, including the Enterprise, and voluntary contributions shall be used for the establishment of the economic assistance fund;

(b) Developing land-based producer States whose economies have been determined to be seriously affected by the production of minerals from the deep seabed shall be assisted from the economic assistance fund of the Authority;

(c) The Authority shall provide assistance from the fund to affected developing land-based producer States, where appropriate, in cooperation with existing global or regional development institutions which have the infrastructure and expertise to carry out such assistance programmes;

(d) The extent and period of such assistance shall be determined on a case-by-case basis. In doing so, due consideration shall be given to the nature and magnitude of the problems encountered by affected developing land-based producer States.

2. Article 151, paragraph 10, of the Convention shall be implemented by means of measures of economic assistance referred to in paragraph 1. Article 160, paragraph 2 (l), article 162, paragraph 2 (n), article 164, paragraph 2 (d), article 171, subparagraph (f), and article 173, paragraph 2 (c), of the Convention shall be interpreted accordingly.

SECTION 8. FINANCIAL TERMS OF CONTRACTS

1. The following principles shall provide the basis for establishing rules, regulations and procedures for financial terms of contracts:

(a) The system of payments to the Authority shall be fair both to the contractor and to the Authority and shall provide adequate means of determining compliance by the contractor with such system:
(b) The rates of payments under the system shall be within the range of those prevailing in respect of land-based mining of the same or similar minerals in order to avoid giving deep seabed miners an artificial competitive advantage or imposing on them a competitive disadvantage;

(c) The system should not be complicated and should not impose major administrative costs on the Authority or on a contractor. Consideration should be given to the adoption of a royalty system or a combination of a royalty and profit-sharing system. If alternative systems are decided upon, the contractor has the right to choose the system applicable to its contract. Any subsequent change in choice between alternative systems, however, shall be made by agreement between the Authority and the contractor;

(d) An annual fixed fee shall be payable from the date of commencement of commercial production. This fee may be credited against other payments due under the system adopted in accordance with subparagraph (c). The amount of the fee shall be established by the Council;

(e) The system of payments may be revised periodically in the light of changing circumstances. Any changes shall be applied in a non-discriminatory manner. Such changes may apply to existing contracts only at the election of the contractor. Any subsequent change in choice between alternative systems shall be made by agreement between the Authority and the contractor;

(f) Disputes concerning the interpretation or application of the rules and regulations based on these principles shall be subject to the dispute settlement procedures set out in the Convention.

2. The provisions of Annex III, article 13, paragraphs 3 to 10, of the Convention shall not apply.

3. With regard to the implementation of Annex III, article 13, paragraph 2, of the Convention, the fee for processing applications for approval of a plan of work limited to one phase, either the exploration phase or the exploitation phase, shall be US$ 250,000.

SECTION 9. THE FINANCE COMMITTEE

1. There is hereby established a Finance Committee. The Committee shall be composed of 15 members with appropriate qualifications relevant to financial matters. States Parties shall nominate candidates of the highest standards of competence and integrity.

2. No two members of the Finance Committee shall be nationals of the same State Party.

3. Members of the Finance Committee shall be elected by the Assembly and due account shall be taken of the need for equitable geographical distribution and the representation of special interests. Each group of States referred to in section 3, paragraph 15 (a), (b), (c) and (d), of this Annex shall be represented on the Committee by at least one member. Until the Authority has sufficient funds other than assessed contributions to meet its administrative expenses, the membership of the Committee shall include representatives of the five largest financial contributors to the administrative budget of the Authority. Thereafter, the election of one member from each group shall be on the basis of nomination by the members of the respective group, without prejudice to the possibility of further members being elected from each group.

4. Members of the Finance Committee shall hold office for a term of five years. They shall be eligible for re-election for a further term.

5. In the event of the death, incapacity or resignation of a member of the Finance Committee prior to the expiration of the term of office, the Assembly shall elect for the remainder of the term a member from the same geographical region or group of States.

6. Members of the Finance Committee shall have no financial interest in any activity relating to matters upon which the Committee has the responsibility to make recommendations. They shall not disclose, even after the termination of their functions, any confidential information coming to their knowledge by reason of their duties for the Authority.

7. Decisions by the Assembly and the Council on the following issues shall take into account recommendations of the Finance Committee:

(a) Draft financial rules, regulations and procedures of the organs of the Authority and the financial management and internal financial administration of the Authority;

(b) Assessment of contributions of members to the administrative budget of the Authority in accordance with article 160, paragraph 2 (a), of the Convention;
(c) All relevant financial matters, including the proposed annual budget prepared by the Secretary-General of the Authority in accordance with article 172 of the Convention and the financial aspects of the implementation of the programmes of work of the Secretariat;

(d) The administrative budget;

(e) Financial obligations of States Parties arising from the implementation of this Agreement and Part XI as well as the administrative and budgetary implications of proposals and recommendations involving expenditure from the funds of the Authority;

(f) Rules, regulations and procedures on the equitable sharing of financial and other economic benefits derived from activities in the Area and the decisions to be made thereon.

8. Decisions in the Finance Committee on questions of procedure shall be taken by a majority of members present and voting. Decisions on questions of substance shall be taken by consensus.

9. The requirement of article 162, paragraph 2 (y), of the Convention to establish a subsidiary organ to deal with financial matters shall be deemed to have been fulfilled by the establishment of the Finance Committee in accordance with this section.
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Multilateral


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Authentic texts: Arabic, Chinese, English, French, Russian and Spanish

Registration with the Secretariat of the United Nations: ex officio. 11 December 2001

Multilatéral

Accord aux fins de l’application des dispositions de la Convention des Nations Unies sur le droit de la mer du 10 décembre 1982 relatives à la conservation et à la gestion des stocks de poissons dont les déplacements s’effectuent tant à l’intérieur qu’au delà de zones économiques exclusives (stocks chevauchants) et des stocks de poissons grands migrateurs (avec annexes). New York, 4 août 1995

Entrée en vigueur : 11 décembre 2001, conformément au paragraphe 1 de l’article 40 (voir la page suivante)

Textes authentiques : arabe, chinois, anglais, français, russe et espagnol

AGREEMENT FOR THE IMPLEMENTATION OF THE PROVISIONS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA OF 10 DECEMBER 1982 RELATING TO THE CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

The States Parties to this Agreement,


Determined to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks,

Resolved to improve cooperation between States to that end,

Calling for more effective enforcement by flag States, port States and coastal States of the conservation and management measures adopted for such stocks,

Seeking to address in particular the problems identified in chapter 17, programme area C, of Agenda 21 adopted by the United Nations Conference on Environment and Development, namely, that the management of high seas fisheries is inadequate in many areas and that some resources are overutilized; noting that there are problems of unregulated fishing, over-capitalization, excessive fleet size, vessel reflagging to escape controls, insufficiently selective gear, unreliable databases and lack of sufficient cooperation between States,

Committing themselves to responsible fisheries,

Conscious of the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimize the risk of long-term or irreversible effects of fishing operations,

Recognizing the need for specific assistance, including financial, scientific and technological assistance, in order that developing States can participate effectively in the conservation, management and sustainable use of straddling fish stocks and highly migratory fish stocks,

Convinced that an agreement for the implementation of the relevant provisions of the Convention would best serve these purposes and contribute to the maintenance of international peace and security,

Affirming that matters not regulated by the Convention or by this Agreement continue to be governed by the rules and principles of general international law,

Have agreed as follows:

PART I
GENERAL PROVISIONS

Article 1
Use of terms and scope

1. For the purposes of this Agreement:


(b) "conservation and management measures" means measures to conserve and manage one or more species of living marine resources that are adopted and applied consistent with the relevant rules of international law as reflected in the Convention and this Agreement;

(c) "fish" includes molluscs and crustaceans except those belonging to sedentary species as defined in article 77 of the Convention; and

(d) "arrangement" means a cooperative mechanism established in accordance with the Convention and this Agreement by two or more States for the purpose, inter alia, of establishing conservation and management measures in a subregion or region for one or more straddling fish stocks or highly migratory fish stocks.

2. (a) "States Parties" means States which have consented to be bound by this Agreement and for which the Agreement is in force.
(b) This Agreement applies mutatis mutandis:
(i) to any entity referred to in article 305, paragraph 1
(c), (d) and (e), of the Convention and
(ii) subject to article 47, to any entity referred to as
an "international organization" in Annex IX, article 1,
of the Convention

which becomes a Party to this Agreement, and to that extent
"States Parties" refers to those entities.

3. This Agreement applies mutatis mutandis to other fishing
entities whose vessels fish on the high seas.

Article 2
Objective
The objective of this Agreement is to ensure the long-term
conservation and sustainable use of straddling fish stocks
and highly migratory fish stocks through effective implemen-
tation of the relevant provisions of the Convention.

Article 3
Application
1. Unless otherwise provided, this Agreement applies to the
conservation and management of straddling fish stocks and
highly migratory fish stocks beyond areas under national
jurisdiction, except that articles 6 and 7 apply also to the
conservation and management of such stocks within areas
under national jurisdiction, subject to the different legal
regimes that apply within areas under national jurisdiction
and in areas beyond national jurisdiction as provided for in
the Convention.

2. In the exercise of its sovereign rights for the purpose of
exploring and exploiting, conserving and managing straddling
fish stocks and highly migratory fish stocks within areas
under national jurisdiction, the coastal State shall apply
mutatis mutandis the general principles enumerated in arti-
cle 5.

3. States shall give due consideration to the respective
capacities of developing States to apply articles 5, 6 and 7
within areas under national jurisdiction and their need for
assistance as provided for in this Agreement. To this end,
Part VII applies mutatis mutandis in respect of areas under
national jurisdiction.

Article 4
Relationship between this Agreement and the Convention
Nothing in this Agreement shall prejudice the rights, jurisdic-
tion and duties of States under the Convention. This
Agreement shall be interpreted and applied in the context of
and in a manner consistent with the Convention.

PART II
CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND
HIGHERLY MIGRATORY FISH STOCKS

Article 5
General principles
In order to conserve and manage straddling fish stocks and
highly migratory fish stocks, coastal States and States
fishing on the high seas shall, in giving effect to their
duty to cooperate in accordance with the Convention:

(a) adopt measures to ensure long-term sustainability of
straddling fish stocks and highly migratory fish stocks and
promote the objective of their optimum utilization;

(b) ensure that such measures are based on the best sci-
entific evidence available and are designed to maintain or
restore stocks at levels capable of producing maximum sus-
tainable yield, as qualified by relevant environmental and
economic factors, including the special requirements of
developing States, and taking into account fishing patterns,
the interdependence of stocks and any generally recommended
international minimum standards, whether subregional,
regional or global;

(c) apply the precautionary approach in accordance with
article 6;
(d) assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;

(e) adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;

(f) minimize pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species, both fish and non-fish species, (hereinafter referred to as non-target species) and impacts on associated or dependent species, in particular endangered species, through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques;

(g) protect biodiversity in the marine environment;
(h) take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources;

(i) take into account the interests of artisanal and subsistence fishers;
(j) collect and share, in a timely manner, complete and accurate data concerning fishing activities on, inter alia, vessel position, catch of target and non-target species and fishing effort, as set out in Annex I, as well as information from national and international research programmes;

(k) promote and conduct scientific research and develop appropriate technologies in support of fishery conservation and management; and

(l) implement and enforce conservation and management measures through effective monitoring, control and surveillance.

Article 6
Application of the precautionary approach

1. States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment.

2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

3. In implementing the precautionary approach, States shall:
(a) improve decision-making for fishery resource conservation and management by obtaining and sharing the best scientific information available and implementing improved techniques for dealing with risk and uncertainty;

(b) apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded;

(c) take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socio-economic conditions; and

(d) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans
which are necessary to ensure the conservation of such species and to protect habitats of special concern.

4. States shall take measures to ensure that, when reference points are approached, they will not be exceeded. In the event that they are exceeded, States shall, without delay, take the action determined under paragraph 3 (b) to restore the stocks.

5. Where the status of target stocks or non-target or associated or dependent species is of concern, States shall subject such stocks and species to enhanced monitoring in order to review their status and the efficacy of conservation and management measures. They shall revise those measures regularly in the light of new information.

6. For new or exploratory fisheries, States shall adopt as soon as possible cautious conservation and management measures, including, inter alia, catch limits and effort limits. Such measures shall remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment shall be implemented. The latter measures shall, if appropriate, allow for the gradual development of the fisheries.

7. If a natural phenomenon has a significant adverse impact on the status of straddling fish stocks or highly migratory fish stocks, States shall adopt conservation and management measures on an emergency basis to ensure that fishing activity does not exacerbate such adverse impact. States shall also adopt such measures on an emergency basis where fishing activity presents a serious threat to the sustainability of such stocks. Measures taken on an emergency basis shall be temporary and shall be based on the best scientific evidence available.

Article 7
Compatibility of conservation and management measures

1. Without prejudice to the sovereign rights of coastal States for the purpose of exploring and exploiting, conserving and managing the living marine resources within areas under national jurisdiction as provided for in the Convention, and the right of all States for their nationals to engage in fishing on the high seas in accordance with the Convention:

(a) with respect to straddling fish stocks, the relevant coastal States and the States whose nationals fish for such stocks in the adjacent high seas area shall seek, either directly or through the appropriate mechanisms for cooperation provided for in Part III, to agree upon the measures necessary for the conservation of these stocks in the adjacent high seas area;

(b) with respect to highly migratory fish stocks, the relevant coastal States and other States whose nationals fish for such stocks in the region shall cooperate, either directly or through the appropriate mechanisms for cooperation provided for in Part III, with a view to ensuring conservation and promoting the objective of optimum utilization of such stocks throughout the region, both within and beyond the areas under national jurisdiction.

2. Conservation and management measures established for the high seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety. To this end, coastal States and States fishing on the high seas have a duty to cooperate for the purpose of achieving compatible measures in respect of such stocks. In determining compatible conservation and management measures, States shall:

(a) take into account the conservation and management measures adopted and applied in accordance with article 61 of the Convention in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the high seas do not undermine the effectiveness of such mea-
sures;

(b) take into account previously agreed measures established and applied for the high seas in accordance with the Convention in respect of the same stocks by relevant coastal States and States fishing on the high seas;

(c) take into account previously agreed measures established and applied in accordance with the Convention in respect of the same stocks by a subregional or regional fisheries management organization or arrangement;

(d) take into account the biological unity and other biological characteristics of the stocks and the relationships between the distribution of the stocks, the fisheries and the geographical particularities of the region concerned, including the extent to which the stocks occur and are fished in areas under national jurisdiction;

(e) take into account the respective dependence of the coastal States and the States fishing on the high seas on the stocks concerned; and

(f) ensure that such measures do not result in harmful impact on the living marine resources as a whole.

3. In giving effect to their duty to cooperate, States shall make every effort to agree on compatible conservation and management measures within a reasonable period of time.

4. If no agreement can be reached within a reasonable period of time, any of the States concerned may invoke the procedures for the settlement of disputes provided for in Part VIII.

5. Pending agreement on compatible conservation and management measures, the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature. In the event that they are unable to agree on such arrangements, any of the States concerned may, for the purpose of obtaining provisional measures, submit the dispute to a court or tribunal in accordance with the procedures for the settlement of disputes provided for in Part VIII.

6. Provisional arrangements or measures entered into or prescribed pursuant to paragraph 5 shall take into account the provisions of this Part, shall have due regard to the rights and obligations of all States concerned, shall not jeopardize or hamper the reaching of final agreement on compatible conservation and management measures and shall be without prejudice to the final outcome of any dispute settlement procedure.

7. Coastal States shall regularly inform States fishing on the high seas in the subregion or region, either directly or through appropriate subregional or regional fisheries management organizations or arrangements, or through other appropriate means, of the measures they have adopted for straddling fish stocks and highly migratory fish stocks within areas under their national jurisdiction.

8. States fishing on the high seas shall regularly inform other interested States, either directly or through appropriate subregional or regional fisheries management organizations or arrangements, or through other appropriate means, of the measures they have adopted for regulating the activities of vessels flying their flag which fish for such stocks on the high seas.

PART III
MECHANISMS FOR INTERNATIONAL COOPERATION CONCERNING STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

Article 8
Cooperation for conservation and management

1. Coastal States and States fishing on the high seas shall, in accordance with the Convention, pursue cooperation in relation to straddling fish stocks and highly migratory fish stocks either directly or through appropriate subregional or
regional fisheries management organizations or arrangements, taking into account the specific characteristics of the sub-region or region, to ensure effective conservation and management of such stocks.

2. States shall enter into consultations in good faith and without delay, particularly where there is evidence that the straddling fish stocks and highly migratory fish stocks concerned may be under threat of over-exploitation or where a new fishery is being developed for such stocks. To this end, consultations may be initiated at the request of any interested State with a view to establishing appropriate arrangements to ensure conservation and management of the stocks. Pending agreement on such arrangements, States shall observe the provisions of this Agreement and shall act in good faith and with due regard to the rights, interests and duties of other States.

3. Where a subregional or regional fisheries management organization or arrangement has the competence to establish conservation and management measures for particular straddling fish stocks or highly migratory fish stocks, States fishing for the stocks on the high seas and relevant coastal States shall give effect to their duty to cooperate by becoming members of such organization or participants in such arrangement, or by agreeing to apply the conservation and management measures established by such organization or arrangement. States having a real interest in the fisheries concerned may become members of such organization or participants in such arrangement. The terms of participation in such organization or arrangement shall not preclude such States from membership or participation, nor shall they be applied in a manner which discriminates against any State or group of States having a real interest in the fisheries concerned.

4. Only those States which are members of such an organization or participants in such an arrangement, or which agree to apply the conservation and management measures established by such organization or arrangement, shall have access to the fishery resources to which those measures apply.

5. Where there is no subregional or regional fisheries management organization or arrangement to establish conservation and management measures for a particular straddling fish stock or highly migratory fish stock, relevant coastal States and States fishing on the high seas for such stock in the subregion or region shall cooperate to establish such an organization or enter into other appropriate arrangements to ensure conservation and management of such stock and shall participate in the work of the organization or arrangement.

6. Any State intending to propose that action be taken by an intergovernmental organization having competence with respect to living resources should, where such action would have a significant effect on conservation and management measures already established by a competent subregional or regional fisheries management organization or arrangement, consult through that organization or arrangement with its members or participants. To the extent practicable, such consultation should take place prior to the submission of the proposal to the intergovernmental organization.

Article 9
Subregional and regional fisheries management organizations and arrangements

1. In establishing subregional or regional fisheries management organizations or in entering into subregional or regional fisheries management arrangements for straddling fish stocks and highly migratory fish stocks, States shall agree, inter alia, on:
(a) the stocks to which conservation and management measures apply, taking into account the biological characteristics of the stocks concerned and the nature of the fisheries involved;
(b) the area of application, taking into account article 7, paragraph 1, and the characteristics of the subregion or
region, including socio-economic, geographical and environmental factors;

(c) the relationship between the work of the new organization or arrangement and the role, objectives and operations of any relevant existing fisheries management organizations or arrangements; and

(d) the mechanisms by which the organization or arrangement will obtain scientific advice and review the status of the stocks, including, where appropriate, the establishment of a scientific advisory body.

2. States cooperating in the formation of a subregional or regional fisheries management organization or arrangement shall inform other States which they are aware have a real interest in the work of the proposed organization or arrangement of such cooperation.

Article 10
Functions of subregional and regional fisheries management organizations and arrangements

In fulfilling their obligation to cooperate through subregional or regional fisheries management organizations or arrangements, States shall:

(a) agree on and comply with conservation and management measures to ensure the long-term sustainability of straddling fish stocks and highly migratory fish stocks;

(b) agree, as appropriate, on participatory rights such as allocations of allowable catch or levels of fishing effort;

(c) adopt and apply any generally recommended international minimum standards for the responsible conduct of fishing operations;

(d) obtain and evaluate scientific advice, review the status of the stocks and assess the impact of fishing on non-target species;

(e) agree on standards for collection, reporting, verification and exchange of data on fisheries for the stocks;

(f) compile and disseminate accurate and complete statistical data, as described in Annex I, to ensure that the best scientific evidence is available, while maintaining confidentiality where appropriate;

(g) promote and conduct scientific assessments of the stocks and relevant research and disseminate the results thereof;

(h) establish appropriate cooperative mechanisms for effective monitoring, control, surveillance and enforcement;

(i) agree on means by which the fishing interests of new members of the organization or new participants in the arrangement will be accommodated;

(j) agree on decision-making procedures which facilitate the adoption of conservation and management measures in a timely and effective manner;

(k) promote the peaceful settlement of disputes in accordance with Part VIII;

(l) ensure the full cooperation of their relevant national agencies and industries in implementing the recommendations and decisions of the organization or arrangement; and

(m) give due publicity to the conservation and management measures established by the organization or arrangement.

Article 11
New members or participants

In determining the nature and extent of participatory rights for new members of a subregional or regional fisheries management organization, or for new participants in a subregional or regional fisheries management arrangement, States shall take into account, inter alia:
(a) the status of the straddling fish stocks and highly migratory fish stocks and the existing level of fishing effort in the fishery;

(b) the respective interests, fishing patterns and fishing practices of new and existing members or participants;

(c) the respective contributions of new and existing members or participants to conservation and management of the stocks, to the collection and provision of accurate data and to the conduct of scientific research on the stocks;

(d) the needs of coastal fishing communities which are dependent mainly on fishing for the stocks;

(e) the needs of coastal States whose economies are overwhelmingly dependent on the exploitation of living marine resources; and

(f) the interests of developing States from the subregion or region in whose areas of national jurisdiction the stocks also occur.

Article 12
Transparency in activities of subregional and regional fisheries management organizations and arrangements

1. States shall provide for transparency in the decision-making process and other activities of subregional and regional fisheries management organizations and arrangements.

2. Representatives from other intergovernmental organizations and representatives from non-governmental organizations concerned with straddling fish stocks and highly migratory fish stocks shall be afforded the opportunity to take part in meetings of subregional and regional fisheries management organizations and arrangements as observers or otherwise, as appropriate, in accordance with the procedures of the organization or arrangement concerned. Such procedures shall not be unduly restrictive in this respect. Such intergovernmental organizations and non-governmental organizations shall have timely access to the records and reports of such organizations and arrangements, subject to the procedural rules on access to them.

Article 13
Strengthening of existing organizations and arrangements
States shall cooperate to strengthen existing subregional and regional fisheries management organizations and arrangements in order to improve their effectiveness in establishing and implementing conservation and management measures for straddling fish stocks and highly migratory fish stocks.

Article 14
Collection and provision of information and cooperation in scientific research

1. States shall ensure that fishing vessels flying their flag provide such information as may be necessary in order to fulfill their obligations under this Agreement. To this end, States shall in accordance with Annex I:

(a) collect and exchange scientific, technical and statistical data with respect to fisheries for straddling fish stocks and highly migratory fish stocks;

(b) ensure that data are collected in sufficient detail to facilitate effective stock assessment and are provided in a timely manner to fulfill the requirements of subregional or regional fisheries management organizations or arrangements;

and

(c) take appropriate measures to verify the accuracy of such data.

2. States shall cooperate, either directly or through subregional or regional fisheries management organizations or arrangements:

(a) to agree on the specification of data and the format in which they are to be provided to such organizations or
arrangements, taking into account the nature of the stocks and the fisheries for those stocks; and

(b) to develop and share analytical techniques and stock assessment methodologies to improve measures for the conservation and management of straddling fish stocks and highly migratory fish stocks.

3. Consistent with Part XIII of the Convention, States shall cooperate, either directly or through competent international organizations, to strengthen scientific research capacity in the field of fisheries and promote scientific research related to the conservation and management of straddling fish stocks and highly migratory fish stocks for the benefit of all. To this end, a State or the competent international organization conducting such research beyond areas under national jurisdiction shall actively promote the publication and dissemination to any interested States of the results of that research and information relating to its objectives and methods and, to the extent practicable, shall facilitate the participation of scientists from those States in such research.

Article 15
Enclosed and semi-enclosed seas
In implementing this Agreement in an enclosed or semi-enclosed sea, States shall take into account the natural characteristics of that sea and shall also act in a manner consistent with Part IX of the Convention and other relevant provisions thereof.

Article 16
Areas of high seas surrounded entirely by an area under the national jurisdiction of a single State

1. States fishing for straddling fish stocks and highly migratory fish stocks in an area of the high seas surrounded entirely by an area under the national jurisdiction of a single State and the latter State shall cooperate to establish conservation and management measures in respect of those stocks in the high seas area. Having regard to the natural characteristics of the area, States shall pay special attention to the establishment of compatible conservation and management measures for such stocks pursuant to article 7. Measures taken in respect of the high seas shall take into account the rights, duties and interests of the coastal State under the Convention, shall be based on the best scientific evidence available and shall also take into account any conservation and management measures adopted and applied in respect of the same stocks in accordance with article 61 of the Convention by the coastal State in the area under national jurisdiction. States shall also agree on measures for monitoring, control, surveillance and enforcement to ensure compliance with the conservation and management measures in respect of the high seas.

2. Pursuant to article 8, States shall act in good faith and make every effort to agree without delay on conservation and management measures to be applied in the carrying out of fishing operations in the area referred to in paragraph 1. If, within a reasonable period of time, the fishing States concerned and the coastal State are unable to agree on such measures, they shall, having regard to paragraph 1, apply article 7, paragraphs 4, 5 and 6, relating to provisional arrangements or measures. Pending the establishment of such provisional arrangements or measures, the States concerned shall take measures in respect of vessels flying their flag in order that they not engage in fisheries which could undermine the stocks concerned.

PART IV
NON-MEMBERS AND NON-PARTICIPANTS

Article 17
Non-members of organizations and non-participants in arrangements

1. A State which is not a member of a subregional or regional fisheries management organization or is not a participant in a subregional or regional fisheries management arrangement, and which does not otherwise agree to apply the conservation and management measures established by such organization or arrangement, is not discharged from the obligation to coop-
erate, in accordance with the Convention and this Agreement, in the conservation and management of the relevant straddling fish stocks and highly migratory fish stocks.

2. Such State shall not authorize vessels flying its flag to engage in fishing operations for the straddling fish stocks or highly migratory fish stocks which are subject to the conservation and management measures established by such organization or arrangement.

3. States which are members of a subregional or regional fisheries management organization or participants in a subregional or regional fisheries management arrangement shall, individually or jointly, request the fishing entities referred to in article 1, paragraph 3, which have fishing vessels in the relevant area to cooperate fully with such organization or arrangement in implementing the conservation and management measures it has established, with a view to having such measures applied de facto as extensively as possible to fishing activities in the relevant area. Such fishing entities shall enjoy benefits from participation in the fishery commensurate with their commitment to comply with conservation and management measures in respect of the stocks.

4. States which are members of such organization or participants in such arrangement shall exchange information with respect to the activities of fishing vessels flying the flags of States which are neither members of the organization nor participants in the arrangement and which are engaged in fishing operations for the relevant stocks. They shall take measures consistent with this Agreement and international law to deter activities of such vessels which undermine the effectiveness of subregional or regional conservation and management measures.

PART V
DUTIES OF THE FLAG STATE
Article 18
Duties of the flag State

1. A State whose vessels fish on the high seas shall take such measures as may be necessary to ensure that vessels flying its flag comply with subregional and regional conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures.

2. A State shall authorize the use of vessels flying its flag for fishing on the high seas only where it is able to exercise effectively its responsibilities in respect of such vessels under the Convention and this Agreement.

3. Measures to be taken by a State in respect of vessels flying its flag shall include:

(a) control of such vessels on the high seas by means of fishing licences, authorizations or permits, in accordance with any applicable procedures agreed at the subregional, regional or global level;

(b) establishment of regulations:

(i) to apply terms and conditions to the licence, authorization or permit sufficient to fulfil any subregional, regional or global obligations of the flag State;

(ii) to prohibit fishing on the high seas by vessels which are not duly licensed or authorized to fish, or fishing on the high seas by vessels otherwise than in accordance with the terms and conditions of a licence, authorization or permit;

(iii) to require vessels fishing on the high seas to carry the licence, authorization or permit on board at all times and to produce it on demand for inspection by a duly authorized person; and

(iv) to ensure that vessels flying its flag do not conduct unauthorized fishing within areas under the national jurisdiction of other States;
(c) establishment of a national record of fishing vessels authorized to fish on the high seas and provision of access to the information contained in that record on request by directly interested States, taking into account any national laws of the flag State regarding the release of such information;

(d) requirements for marking of fishing vessels and fishing gear for identification in accordance with uniform and internationally recognizable vessel and gear marking systems, such as the Food and Agriculture Organization of the United Nations Standard Specifications for the Marking and Identification of Fishing Vessels;

(e) requirements for recording and timely reporting of vessel position, catch of target and non-target species, fishing effort and other relevant fisheries data in accordance with subregional, regional and global standards for collection of such data;

(f) requirements for verifying the catch of target and non-target species through such means as observer programmes, inspection schemes, unloading reports, supervision of transhipment and monitoring of landed catches and market statistics;

(g) monitoring, control and surveillance of such vessels, their fishing operations and related activities by, inter alia:

(i) the implementation of national inspection schemes and subregional and regional schemes for cooperation in enforcement pursuant to articles 21 and 22, including requirements for such vessels to permit access by duly authorized inspectors from other States;

(ii) the implementation of national observer programmes and subregional and regional observer programmes in which the flag State is a participant, including requirements for such vessels to permit access by observers from other States to carry out the functions agreed under the pro-

grammes; and

(iii) the development and implementation of vessel monitoring systems, including, as appropriate, satellite transmitter systems, in accordance with any national programmes and those which have been subregionally, regionally or globally agreed among the States concerned;

(h) regulation of transhipment on the high seas to ensure that the effectiveness of conservation and management measures is not undermined; and

(i) regulation of fishing activities to ensure compliance with subregional, regional or global measures, including those aimed at minimizing catches of non-target species.

4. Where there is a subregionally, regionally or globally agreed system of monitoring, control and surveillance in effect, States shall ensure that the measures they impose on vessels flying their flag are compatible with that system.

PART VI
COMPLIANCE AND ENFORCEMENT
Article 19
Compliance and enforcement by the flag State
1. A State shall ensure compliance by vessels flying its flag with subregional and regional conservation and management measures for straddling fish stocks and highly migratory fish stocks. To this end, that State shall:

(a) enforce such measures irrespective of where violations occur;

(b) investigate immediately and fully any alleged violation of subregional or regional conservation and management measures, which may include the physical inspection of the vessels concerned, and report promptly to the State alleging the violation and the relevant subregional or regional organization or arrangement on the progress and outcome of the investigation;
(c) require any vessel flying its flag to give information to the investigating authority regarding vessel position, catches, fishing gear, fishing operations and related activities in the area of an alleged violation;
(d) if satisfied that sufficient evidence is available in respect of an alleged violation, refer the case to its authorities with a view to instituting proceedings without delay in accordance with its laws and, where appropriate, detain the vessel concerned; and

(e) ensure that, where it has been established, in accordance with its laws, a vessel has been involved in the commission of a serious violation of such measures, the vessel does not engage in fishing operations on the high seas until such time as all outstanding sanctions imposed by the flag State in respect of the violation have been complied with.

2. All investigations and judicial proceedings shall be carried out expeditiously. Sanctions applicable in respect of violations shall be adequate in severity to be effective in securing compliance and to discourage violations wherever they occur and shall deprive offenders of the benefits accruing from their illegal activities. Measures applicable in respect of masters and other officers of fishing vessels shall include provisions which may permit, inter alia, refusal, withdrawal or suspension of authorizations to serve as masters or officers on such vessels.

Article 20
International cooperation in enforcement

1. States shall cooperate, either directly or through subregional or regional fisheries management organizations or arrangements, to ensure compliance with and enforcement of subregional and regional conservation and management measures for straddling fish stocks and highly migratory fish stocks.

2. A flag State conducting an investigation of an alleged violation of conservation and management measures for straddling fish stocks or highly migratory fish stocks may request the assistance of any other State whose cooperation may be useful in the conduct of that investigation. All States shall endeavour to meet reasonable requests made by a flag State in connection with such investigations.

3. A flag State may undertake such investigations directly, in cooperation with other interested States or through the relevant subregional or regional fisheries management organization or arrangement. Information on the progress and outcome of the investigations shall be provided to all States having an interest in, or affected by, the alleged violation.

4. States shall assist each other in identifying vessels reported to have engaged in activities undermining the effectiveness of subregional, regional or global conservation and management measures.

5. States shall, to the extent permitted by national laws and regulations, establish arrangements for making available to prosecuting authorities in other States evidence relating to alleged violations of such measures.

6. Where there are reasonable grounds for believing that a vessel on the high seas has been engaged in unauthorized fishing within an area under the jurisdiction of a coastal State, the flag State of that vessel, at the request of the coastal State concerned, shall immediately and fully investigate the matter. The flag State shall cooperate with the coastal State in taking appropriate enforcement action in such cases and may authorize the relevant authorities of the coastal State to board and inspect the vessel on the high seas. This paragraph is without prejudice to article 111 of the Convention.

7. States Parties which are members of a subregional or regional fisheries management organization or participants in a subregional or regional fisheries management arrangement may take action in accordance with international law, including through recourse to subregional or regional proce-
dures established for this purpose, to deter vessels which have engaged in activities which undermine the effectiveness of or otherwise violate the conservation and management measures established by that organization or arrangement from fishing on the high seas in the subregion or region until such time as appropriate action is taken by the flag State.

Article 21

Subregional and regional cooperation in enforcement

1. In any high seas area covered by a subregional or regional fisheries management organization or arrangement, a State Party which is a member of such organization or a participant in such arrangement may, through its duly authorized inspectors, board and inspect, in accordance with paragraph 2, fishing vessels flying the flag of another State Party to this Agreement, whether or not such State Party is also a member of the organization or a participant in the arrangement, for the purpose of ensuring compliance with conservation and management measures for straddling fish stocks and highly migratory fish stocks established by that organization or arrangement.

2. States shall establish, through subregional or regional fisheries management organizations or arrangements, procedures for boarding and inspection pursuant to paragraph 1, as well as procedures to implement other provisions of this article. Such procedures shall be consistent with this article and the basic procedures set out in article 22 and shall not discriminate against non-members of the organization or non-participants in the arrangement. Boarding and inspection as well as any subsequent enforcement action shall be conducted in accordance with such procedures. States shall give due publicity to procedures established pursuant to this paragraph.

3. If, within two years of the adoption of this Agreement, any organization or arrangement has not established such procedures, boarding and inspection pursuant to paragraph 1, as well as any subsequent enforcement action, shall, pending the establishment of such procedures, be conducted in accor-

dance with this article and the basic procedures set out in article 22.

4. Prior to taking action under this article, inspecting States shall, either directly or through the relevant subregional or regional fisheries management organization or arrangement, inform all States whose vessels fish on the high seas in the subregion or region of the form of identification issued to their duly authorized inspectors. The vessels used for boarding and inspection shall be clearly marked and identifiable as being on government service. At the time of becoming a Party to this Agreement, a State shall designate an appropriate authority to receive notifications pursuant to this article and shall give due publicity of such designation through the relevant subregional or regional fisheries management organization or arrangement.

5. Where, following a boarding and inspection, there are clear grounds for believing that a vessel has engaged in any activity contrary to the conservation and management measures referred to in paragraph 1, the inspecting State shall, where appropriate, secure evidence and shall promptly notify the flag State of the alleged violation.

6. The flag State shall respond to the notification referred to in paragraph 5 within three working days of its receipt, or such other period as may be prescribed in procedures established in accordance with paragraph 2, and shall either:

(a) fulfill, without delay, its obligations under article 19 to investigate and, if evidence so warrants, take enforcement action with respect to the vessel, in which case it shall promptly inform the inspecting State of the results of the investigation and of any enforcement action taken; or

(b) authorize the inspecting State to investigate.

7. Where the flag State authorizes the inspecting State to investigate an alleged violation, the inspecting State shall, without delay, communicate the results of that inves-
tigation to the flag State. The flag State shall, if evidence so warrants, fulfill its obligations to take enforcement action with respect to the vessel. Alternatively, the flag State may authorize the inspecting State to take such enforcement action as the flag State may specify with respect to the vessel, consistent with the rights and obligations of the flag State under this Agreement.

8. Where, following boarding and inspection, there are clear grounds for believing that a vessel has committed a serious violation, and the flag State has either failed to respond or failed to take action as required under paragraphs 6 or 7, the inspectors may remain on board and secure evidence and may require the master to assist in further investigation including, where appropriate, by bringing the vessel without delay to the nearest appropriate port, or to such other port as may be specified in procedures established in accordance with paragraph 2. The inspecting State shall immediately inform the flag State of the name of the port to which the vessel is to proceed. The inspecting State and the flag State and, as appropriate, the port State shall take all necessary steps to ensure the well-being of the crew regardless of their nationality.

9. The inspecting State shall inform the flag State and the relevant organization or the participants in the relevant arrangement of the results of any further investigation.

10. The inspecting State shall require its inspectors to observe generally accepted international regulations, procedures and practices relating to the safety of the vessel and the crew, minimize interference with fishing operations and, to the extent practicable, avoid action which would adversely affect the quality of the catch on board. The inspecting State shall ensure that boarding and inspection is not conducted in a manner that would constitute harassment of any fishing vessel.

11. For the purposes of this article, a serious violation means:

(a) fishing without a valid licence, authorization or permit issued by the flag State in accordance with article 18, paragraph 3 (a);

(b) failing to maintain accurate records of catch and catch-related data, as required by the relevant subregional or regional fisheries management organization or arrangement, or serious misreporting of catch, contrary to the catch reporting requirements of such organization or arrangement;

(c) fishing in a closed area, fishing during a closed season or fishing without, or after attainment of, a quota established by the relevant subregional or regional fisheries management organization or arrangement;

(d) directed fishing for a stock which is subject to a moratorium or for which fishing is prohibited;

(e) using prohibited fishing gear;

(f) falsifying or concealing the markings, identity or registration of a fishing vessel;

(g) concealing, tampering with or disposing of evidence relating to an investigation;

(h) multiple violations which together constitute a serious disregard of conservation and management measures; or

(i) such other violations as may be specified in procedures established by the relevant subregional or regional fisheries management organization or arrangement.

12. Notwithstanding the other provisions of this article, the flag State may, at any time, take action to fulfill its obligations under article 19 with respect to an alleged violation. Where the vessel is under the direction of the inspecting State, the inspecting State shall, at the request of the flag State, release the vessel to the flag State along with full information on the progress and outcome of its investigation.
13. This article is without prejudice to the right of the flag State to take any measures, including proceedings to impose penalties, according to its laws.

14. This article applies mutatis mutandis to boarding and inspection by a State Party which is a member of a subregional or regional fisheries management organization or a participant in a subregional or regional fisheries management arrangement and which has clear grounds for believing that a fishing vessel flying the flag of another State Party has engaged in any activity contrary to relevant conservation and management measures referred to in paragraph 1 in the high seas area covered by such organization or arrangement, and such vessel has subsequently, during the same fishing trip, entered into an area under the national jurisdiction of the inspecting State.

15. Where a subregional or regional fisheries management organization or arrangement has established an alternative mechanism which effectively discharges the obligation under this Agreement of its members or participants to ensure compliance with the conservation and management measures established by the organization or arrangement, members of such organization or participants in such arrangement may agree to limit the application of paragraph 1 as between themselves in respect of the conservation and management measures which have been established in the relevant high seas area.

16. Action taken by States other than the flag State in respect of vessels having engaged in activities contrary to subregional or regional conservation and management measures shall be proportionate to the seriousness of the violation.

17. Where there are reasonable grounds for suspecting that a fishing vessel on the high seas is without nationality, a State may board and inspect the vessel. Where evidence so warrants, the State may take such action as may be appropriate in accordance with international law.

18. States shall be liable for damage or loss attributable to them arising from action taken pursuant to this article when such action is unlawful or exceeds that reasonably required in the light of available information to implement the provisions of this article.

Article 22
Basic procedures for boarding and inspection pursuant to article 21

1. The inspecting State shall ensure that its duly authorized inspectors:
   (a) present credentials to the master of the vessel and produce a copy of the text of the relevant conservation and management measures or rules and regulations in force in the high seas area in question pursuant to those measures;
   (b) initiate notice to the flag State at the time of the boarding and inspection;
   (c) do not interfere with the master's ability to communicate with the authorities of the flag State during the boarding and inspection;
   (d) provide a copy of a report on the boarding and inspection to the master and to the authorities of the flag State, noting therein any objection or statement which the master wishes to have included in the report;
   (e) promptly leave the vessel following completion of the inspection if they find no evidence of a serious violation; and
   (f) avoid the use of force except when and to the degree necessary to ensure the safety of the inspectors and where the inspectors are obstructed in the execution of their duties. The degree of force used shall not exceed that reasonably required in the circumstances.

2. The duly authorized inspectors of an inspecting State
shall have the authority to inspect the vessel, its licence, gear, equipment, records, facilities, fish and fish products and any relevant documents necessary to verify compliance with the relevant conservation and management measures.

3. The flag State shall ensure that vessel masters:
(a) accept and facilitate prompt and safe boarding by the inspectors;
(b) cooperate with and assist in the inspection of the vessel conducted pursuant to these procedures;
(c) do not obstruct, intimidate or interfere with the inspectors in the performance of their duties;

(d) allow the inspectors to communicate with the authorities of the flag State and the inspecting State during the boarding and inspection;

(e) provide reasonable facilities, including, where appropriate, food and accommodation, to the inspectors; and

(f) facilitate safe disembarkation by the inspectors.

4. In the event that the master of a vessel refuses to accept boarding and inspection in accordance with this article and article 21, the flag State shall, except in circumstances where, in accordance with generally accepted international regulations, procedures and practices relating to safety at sea, it is necessary to delay the boarding and inspection, direct the master of the vessel to submit immediately to boarding and inspection and, if the master does not comply with such direction, shall suspend the vessel’s authorization to fish and order the vessel to return immediately to port. The flag State shall advise the inspecting State of the action it has taken when the circumstances referred to in this paragraph arise.

Article 23
Measures taken by a port State
1. A port State has the right and the duty to take measures, in accordance with international law, to promote the effectiveness of subregional, regional and global conservation and management measures. When taking such measures a port State shall not discriminate in form or in fact against the vessels of any State.

2. A port State may, inter alia, inspect documents, fishing gear and catch on board fishing vessels, when such vessels are voluntarily in its ports or at its offshore terminals.

3. States may adopt regulations empowering the relevant national authorities to prohibit landings and transshipments where it has been established that the catch has been taken in a manner which undermines the effectiveness of subregional, regional or global conservation and management measures on the high seas.

4. Nothing in this article affects the exercise by States of their sovereignty over ports in their territory in accordance with international law.

PART VII
REQUIREMENTS OF DEVELOPING STATES

Article 24
Recognition of the special requirements of developing States
1. States shall give full recognition to the special requirements of developing States in relation to conservation and management of straddling fish stocks and highly migratory fish stocks and development of fisheries for such stocks. To this end, States shall, either directly or through the United Nations Development Programme, the Food and Agriculture Organization of the United Nations and other specialized agencies, the Global Environment Facility, the Commission on Sustainable Development and other appropriate international and regional organizations and bodies, provide assistance to developing States.

2. In giving effect to the duty to cooperate in the establishment of conservation and management measures for straddling fish stocks and highly migratory fish stocks, States shall take into account the special requirements of developing States, in particular:
(a) the vulnerability of developing States which are dependent on the exploitation of living marine resources, including for meeting the nutritional requirements of their populations or parts thereof;

(b) the need to avoid adverse impacts on, and ensure access to fisheries by, subsistence, small-scale and artisanal fishers and women fishworkers, as well as indigenous people in developing States, particularly small island developing States; and

(c) the need to ensure that such measures do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto developing States.

Article 25
Forms of cooperation with developing States

1. States shall cooperate, either directly or through subregional, regional or global organizations:

(a) to enhance the ability of developing States, in particular the least-developed among them and small island developing States, to conserve and manage straddling fish stocks and highly migratory fish stocks and to develop their own fisheries for such stocks;

(b) to assist developing States, in particular the least-developed among them and small island developing States, to enable them to participate in high seas fisheries for such stocks, including facilitating access to such fisheries subject to articles 5 and 11; and

(c) to facilitate the participation of developing States in subregional and regional fisheries management organizations and arrangements.

2. Cooperation with developing States for the purposes set out in this article shall include the provision of financial assistance, assistance relating to human resources development, technical assistance, transfer of technology, including through joint venture arrangements, and advisory and consultative services.

3. Such assistance shall, inter alia, be directed specifically towards:

(a) improved conservation and management of straddling fish stocks and highly migratory fish stocks through collection, reporting, verification, exchange and analysis of fisheries data and related information;

(b) stock assessment and scientific research; and

(c) monitoring, control, surveillance, compliance and enforcement, including training and capacity-building at the local level, development and funding of national and regional observer programmes and access to technology and equipment.

Article 26
Special assistance in the implementation of this Agreement

1. States shall cooperate to establish special funds to assist developing States in the implementation of this Agreement, including assisting developing States to meet the costs involved in any proceedings for the settlement of disputes to which they may be parties.

2. States and international organizations should assist developing States in establishing new subregional or regional fisheries management organizations or arrangements, or in strengthening existing organizations or arrangements, for the conservation and management of straddling fish stocks and highly migratory fish stocks.

PART VIII
PEACEFUL SETTLEMENT OF DISPUTES

Article 27
Obligation to settle disputes by peaceful means
States have the obligation to settle their disputes by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrange-
ments, or other peaceful means of their own choice.

Article 28
Prevention of disputes
States shall cooperate in order to prevent disputes. To this end, States shall agree on efficient and expeditious decision-making procedures within subregional and regional fisheries management organizations and arrangements and shall strengthen existing decision-making procedures as necessary.

Article 29
Disputes of a technical nature
Where a dispute concerns a matter of a technical nature, the States concerned may refer the dispute to an ad hoc expert panel established by them. The panel shall confer with the States concerned and shall endeavour to resolve the dispute expeditiously without recourse to binding procedures for the settlement of disputes.

Article 30
Procedures for the settlement of disputes
1. The provisions relating to the settlement of disputes set out in Part XV of the Convention apply mutatis mutandis to any dispute between States Parties to this Agreement concerning the interpretation or application of this Agreement, whether or not they are also Parties to the Convention.

2. The provisions relating to the settlement of disputes set out in Part XV of the Convention apply mutatis mutandis to any dispute between States Parties to this Agreement concerning the interpretation or application of a subregional, regional or global fisheries agreement relating to straddling fish stocks or highly migratory fish stocks to which they are parties, including any dispute concerning the conservation and management of such stocks, whether or not they are also Parties to the Convention.

3. Any procedure accepted by a State Party to this Agreement and the Convention pursuant to article 287 of the Convention shall apply to the settlement of disputes under this Part, unless that State Party, when signing, ratifying or acceding to this Agreement, or at any time thereafter, has accepted another procedure pursuant to article 287 for the settlement of disputes under this Part.

4. A State Party to this Agreement which is not a Party to the Convention, when signing, ratifying or acceding to this Agreement, or at any time thereafter, shall be free to choose, by means of a written declaration, one or more of the means set out in article 287, paragraph 1, of the Convention for the settlement of disputes under this Part. Article 287 shall apply to such a declaration, as well as to any dispute to which such State is a party which is not covered by a declaration in force. For the purposes of conciliation and arbitration in accordance with Annexes V, VII and VIII to the Convention, such State shall be entitled to nominate conciliators, arbitrators and experts to be included in the lists referred to in Annex V, article 2, Annex VII, article 2, and Annex VIII, article 2, for the settlement of disputes under this Part.

5. Any court or tribunal to which a dispute has been submitted under this Part shall apply the relevant provisions of the Convention, of this Agreement and of any relevant subregional, regional or global fisheries agreement, as well as generally accepted standards for the conservation and management of living marine resources and other rules of international law not incompatible with the Convention, with a view to ensuring the conservation of the straddling fish stocks and highly migratory fish stocks concerned.

Article 31
Provisional measures
1. Pending the settlement of a dispute in accordance with this Part, the parties to the dispute shall make every effort to enter into provisional arrangements of a practical nature.

2. Without prejudice to article 290 of the Convention, the court or tribunal to which the dispute has been submitted
under this Part may prescribe any provisional measures which it considers appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent damage to the stocks in question, as well as in the circumstances referred to in article 7, paragraph 5, and article 16, paragraph 2.

3. A State Party to this Agreement which is not a Party to the Convention may declare that, notwithstanding article 290, paragraph 5, of the Convention, the International Tribunal for the Law of the Sea shall not be entitled to prescribe, modify or revoke provisional measures without the agreement of such State.

Article 32
Limitations on applicability of procedures for the settlement of disputes

Article 297, paragraph 3, of the Convention applies also to this Agreement.

PART IX
NON-PARTIES TO THIS AGREEMENT
Article 33
Non-parties to this Agreement

1. States Parties shall encourage non-parties to this Agreement to become parties thereto and to adopt laws and regulations consistent with its provisions.

2. States Parties shall take measures consistent with this Agreement and international law to deter the activities of vessels flying the flag of non-parties which undermine the effective implementation of this Agreement.

PART X
GOOD FAITH AND ABUSE OF RIGHTS
Article 34
Good faith and abuse of rights

States Parties shall fulfill in good faith the obligations assumed under this Agreement and shall exercise the rights recognized in this Agreement in a manner which would not constitute an abuse of right.

Part XI
RESPONSIBILITY AND LIABILITY
Article 35
Responsibility and liability

States Parties are liable in accordance with international law for damage or loss attributable to them in regard to this Agreement.

PART XII
REVIEW CONFERENCE
Article 36
Review conference

1. Four years after the date of entry into force of this Agreement, the Secretary-General of the United Nations shall convene a conference with a view to assessing the effectiveness of this Agreement in securing the conservation and management of straddling fish stocks and highly migratory fish stocks. The Secretary-General shall invite to the conference all States Parties and those States and entities which are entitled to become parties to this Agreement as well as those intergovernmental and non-governmental organizations entitled to participate as observers.

2. The conference shall review and assess the adequacy of the provisions of this Agreement and, if necessary, propose means of strengthening the substance and methods of implementation of those provisions in order to better address any continuing problems in the conservation and management of straddling fish stocks and highly migratory fish stocks.

PART XIII
FINAL PROVISIONS
Article 37
Signature

This Agreement shall be open for signature by all States and the other entities referred to in article 1, paragraph 2(b), and shall remain open for signature at United Nations Headquarters for twelve months from the fourth of December 1995.
Article 38  
Ratification  
This Agreement is subject to ratification by States and the other entities referred to in article 1, paragraph 2(b). The instruments of ratification shall be deposited with the Secretary-General of the United Nations.

Article 39  
Accession  
This Agreement shall remain open for accession by States and the other entities referred to in article 1, paragraph 2(b). The instruments of accession shall be deposited with the Secretary-General of the United Nations.

Article 40  
Entry into force  
1. This Agreement shall enter into force 30 days after the date of deposit of the thirtieth instrument of ratification or accession.

2. For each State or entity which ratifies the Agreement or accedes thereto after the deposit of the thirtieth instrument of ratification or accession, this Agreement shall enter into force on the thirtieth day following the deposit of its instrument of ratification or accession.

Article 41  
Provisional application  
1. This Agreement shall be applied provisionally by a State or entity which consents to its provisional application by so notifying the depositary in writing. Such provisional application shall become effective from the date of receipt of the notification.

2. Provisional application by a State or entity shall terminate upon the entry into force of this Agreement for that State or entity or upon notification by that State or entity to the depositary in writing of its intention to terminate provisional application.

Article 42  
Reservations and exceptions  
No reservations or exceptions may be made to this Agreement.

Article 43  
Declarations and statements  
Article 42 does not preclude a State or entity, when signing, ratifying or acceding to this Agreement, from making declarations or statements, however phrased or named, with a view, inter alia, to the harmonization of its laws and regulations with the provisions of this Agreement, provided that such declarations or statements do not purport to exclude or to modify the legal effect of the provisions of this Agreement in their application to that State or entity.

Article 44  
Relation to other agreements  
1. This Agreement shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Agreement and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Agreement.

2. Two or more States Parties may conclude agreements modifying or suspending the operation of provisions of this Agreement, applicable solely to the relations between them, provided that such agreements do not relate to a provision derogation from which is incompatible with the effective execution of the object and purpose of this Agreement, and provided further that such agreements shall not affect the application of the basic principles embodied herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Agreement.

3. States Parties intending to conclude an agreement referred to in paragraph 2 shall notify the other States Parties through the depositary of this Agreement of their intention to conclude the agreement and of the modification
or suspension for which it provides.

Article 45
Amendment

1. A State Party may, by written communication addressed to the Secretary-General of the United Nations, propose amendments to this Agreement and request the convening of a conference to consider such proposed amendments. The Secretary-General shall circulate such communication to all States Parties. If, within six months from the date of the circulation of the communication, not less than one half of the States Parties reply favourably to the request, the Secretary-General shall convene the conference.

2. The decision-making procedure applicable at the amendment conference convened pursuant to paragraph 1 shall be the same as that applicable at the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, unless otherwise decided by the conference. The conference should make every effort to reach agreement on any amendments by way of consensus and there should be no voting on them until all efforts at consensus have been exhausted.

3. Once adopted, amendments to this Agreement shall be open for signature at United Nations Headquarters by States Parties for twelve months from the date of adoption, unless otherwise provided in the amendment itself.

4. Articles 38, 39, 47 and 50 apply to all amendments to this Agreement.

5. Amendments to this Agreement shall enter into force for the States Parties ratifying or acceding to them on the thirtieth day following the deposit of instruments of ratification or accession by two thirds of the States Parties. Thereafter, for each State Party ratifying or acceding to an amendment after the deposit of the required number of such instruments, the amendment shall enter into force on the thirtieth day following the deposit of its instrument of ratification or accession.

6. An amendment may provide that a smaller or a larger number of ratifications or accessions shall be required for its entry into force than are required by this article.

7. A State which becomes a Party to this Agreement after the entry into force of amendments in accordance with paragraph 5 shall, failing an expression of a different intention by that State:

(a) be considered as a Party to this Agreement as so amended; and
(b) be considered as a Party to the unamended Agreement in relation to any State Party not bound by the amendment.

Article 46
Denunciation

1. A State Party may, by written notification addressed to the Secretary-General of the United Nations, denounce this Agreement and may indicate its reasons. Failure to indicate reasons shall not affect the validity of the denunciation. The denunciation shall take effect one year after the date of receipt of the notification, unless the notification specifies a later date.

2. The denunciation shall not in any way affect the duty of any State Party to fulfil any obligation embodied in this Agreement to which it would be subject under international law independently of this Agreement.

Article 47
Participation by international organizations

1. In cases where an international organization referred to in Annex IX, article 1, of the Convention does not have competence over all the matters governed by this Agreement, Annex IX to the Convention shall apply mutatis mutandis to participation by such international organization in this Agreement, except that the following provisions of that Annex shall not apply:

(a) article 2, first sentence; and
(b) article 3, paragraph 1.

2. In cases where an international organization referred to
in Annex IX, article 1, of the Convention has competence over all the matters governed by this Agreement, the following provisions shall apply to participation by such international organization in this Agreement:

(a) at the time of signature or accession, such international organization shall make a declaration stating:

(i) that it has competence over all the matters governed by this Agreement;

(ii) that, for this reason, its member States shall not become States Parties, except in respect of their territories for which the international organization has no responsibility; and

(iii) that it accepts the rights and obligations of States under this Agreement;

(b) participation of such an international organization shall in no case confer any rights under this Agreement on member States of the international organization;

(c) in the event of a conflict between the obligations of an international organization under this Agreement and its obligations under the agreement establishing the international organization or any acts relating to it, the obligations under this Agreement shall prevail.

Article 48
Annexes

1. The Annexes form an integral part of this Agreement and, unless expressly provided otherwise, a reference to this Agreement or to one of its Parts includes a reference to the Annexes relating thereto.

2. The Annexes may be revised from time to time by States Parties. Such revisions shall be based on scientific and technical considerations. Notwithstanding the provisions of article 45, if a revision to an Annex is adopted by consensus at a meeting of States Parties, it shall be incorporated in this Agreement and shall take effect from the date of its adoption or from such other date as may be specified in the revision. If a revision to an Annex is not adopted by consensus at such a meeting, the amendment procedures set out in article 45 shall apply.

Article 49
Depositary

The Secretary-General of the United Nations shall be the depositary of this Agreement and any amendments or revisions thereto.

Article 50
Authentic texts

The Arabic, Chinese, English, French, Russian and Spanish texts of this Agreement are equally authentic.

IN WITNESS WHEREOF, the undersigned Plenipotentiaries, being duly authorized thereto, have signed this Agreement.

OPENED FOR SIGNATURE at New York, this fourth day of December, one thousand nine hundred and ninety-five, in a single original, in the Arabic, Chinese, English, French, Russian and Spanish languages.

ANNEX I

STANDARD REQUIREMENTS FOR THE COLLECTION AND SHARING OF DATA

Article 1
General principles

1. The timely collection, compilation and analysis of data are fundamental to the effective conservation and management of straddling fish stocks and highly migratory fish stocks. To this end, data from fisheries for these stocks on the high seas and those in areas under national jurisdiction are required and should be collected and compiled in such a way as to enable statistically meaningful analysis for the purposes of fishery resource conservation and management. These
data include catch and fishing effort statistics and other fishery-related information, such as vessel-related and other data for standardizing fishing effort. Data collected should also include information on non-target and associated or dependent species. All data should be verified to ensure accuracy. Confidentiality of non-aggregated data shall be maintained. The dissemination of such data shall be subject to the terms on which they have been provided.

2. Assistance, including training as well as financial and technical assistance, shall be provided to developing States in order to build capacity in the field of conservation and management of living marine resources. Assistance should focus on enhancing capacity to implement data collection and verification, observer programmes, data analysis and research projects supporting stock assessments. The fullest possible involvement of developing State scientists and managers in conservation and management of straddling fish stocks and highly migratory fish stocks should be promoted.

**Article 2**

**Principles of data collection, compilation and exchange**

The following general principles should be considered in defining the parameters for collection, compilation and exchange of data from fishing operations for straddling fish stocks and highly migratory fish stocks:

(a) States should ensure that data are collected from vessels flying their flag on fishing activities according to the operational characteristics of each fishing method (e.g., each individual tow for trawl, each set for long-line and purse-seines, each school fished for pole-and-line and each day fished for trawl) and in sufficient detail to facilitate effective stock assessment;

(b) States should ensure that fishery data are verified through an appropriate system;

(c) States should compile fishery-related and other supporting scientific data and provide them in an agreed format and in a timely manner to the relevant subregional or regional fisheries management organization or arrangement where one exists. Otherwise, States should cooperate to exchange data either directly or through such other cooperative mechanisms as may be agreed among them;

(d) States should agree, within the framework of subregional or regional fisheries management organizations or arrangements, or otherwise, on the specification of data and the format in which they are to be provided, in accordance with this Annex and taking into account the nature of the stocks and the fisheries for those stocks in the region. Such organizations or arrangements should request non-members or non-participants to provide data concerning relevant fishing activities by vessels flying their flag;

(e) such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement; and

(f) scientists of the flag State and from the relevant subregional or regional fisheries management organization or arrangement should analyse the data separately or jointly, as appropriate.

**Article 3**

**Basic fishery data**

1. States shall collect and make available to the relevant subregional or regional fisheries management organization or arrangement the following types of data in sufficient detail to facilitate effective stock assessment in accordance with agreed procedures:

(a) time series of catch and effort statistics by fishery and fleet;

(b) total catch in number, nominal weight, or both, by species (both target and non-target) as is appropriate to each fishery. [Nominal weight is defined by the Food and Agriculture Organization of the United Nations as the live-weight equivalent of the landings];
(c) discard statistics, including estimates where necessary, reported as number or nominal weight by species, as is appropriate to each fishery;

(d) effort statistics appropriate to each fishing method; and

(e) fishing location, date and time fished and other statistics on fishing operations as appropriate.

2. States shall also collect where appropriate and provide to the relevant subregional or regional fisheries management organization or arrangement information to support stock assessment, including:

(a) composition of the catch according to length, weight and sex;

(b) other biological information supporting stock assessments, such as information on age, growth, recruitment, distribution and stock identity; and

(c) other relevant research, including surveys of abundance, biomass surveys, hydro-acoustic surveys, research on environmental factors affecting stock abundance, and oceanographic and ecological studies.

Article 4

Vessel data and information

1. States should collect the following types of vessel-related data for standardizing fleet composition and vessel fishing power and for converting between different measures of effort in the analysis of catch and effort data:

(a) vessel identification, flag and port of registry;

(b) vessel type;

(c) vessel specifications (e.g., material of construction, date built, registered length, gross registered tonnage, power of main engines, hold capacity and catch storage methods); and

(d) fishing gear description (e.g., types, gear specifications and quantity).

2. The flag State will collect the following information: (a) navigation and position fixing aids; (b) communication equipment and international radio call sign; and (c) crew size.

Article 5

Reporting

A State shall ensure that vessels flying its flag send to its national fisheries administration and, where agreed, to the relevant subregional or regional fisheries management organization or arrangement, logbook data on catch and effort, including data on fishing operations on the high seas, at sufficiently frequent intervals to meet national requirements and regional and international obligations. Such data shall be transmitted, where necessary, by radio, telex, facsimile or satellite transmission or by other means.

Article 6

Data verification

States or, as appropriate, subregional or regional fisheries management organizations or arrangements should establish mechanisms for verifying fishery data, such as: (a) position verification through vessel monitoring systems; (b) scientific observer programmes to monitor catch, effort, catch composition (target and non-target) and other details of fishing operations;

(c) vessel trip, landing and transshipment reports; and

(d) port sampling.

Article 7

Data exchange

1. Data collected by flag States must be shared with other flag States and relevant coastal States through appropriate subregional or regional fisheries management organizations or arrangements. Such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement, while maintaining confidentiality of non-aggregated data, and should, to the extent feasible, develop database
systems which provide efficient access to data.

2. At the global level, collection and dissemination of data should be effected through the Food and Agriculture Organization of the United Nations. Where a subregional or regional fisheries management organization or arrangement does not exist, that organization may also do the same at the subregional or regional level by arrangement with the States concerned.

ANNEX II
GUIDELINES FOR THE APPLICATION OF PRECAUTIONARY REFERENCE-POINTS IN CONSERVATION AND MANAGEMENT OF STRADDLING FISH- STOCKS AND HIGHLY MIGRATORY FISH STOKCS

1. A precautionary reference point is an estimated value derived through an agreed scientific procedure, which corresponds to the state of the resource and of the fishery, and which can be used as a guide for fisheries management.

2. Two types of precautionary reference points should be used: conservation, or limit, reference points and management, or target, reference points. Limit reference points set boundaries which are intended to constrain harvesting within safe biological limits within which the stocks can produce maximum sustainable yield. Target reference points are intended to meet management objectives.

3. Precautionary reference points should be stock-specific to account, inter alia, for the reproductive capacity, the resilience of each stock and the characteristics of fisheries exploiting the stock, as well as other sources of mortality and major sources of uncertainty.

4. Management strategies shall seek to maintain or restore populations of harvested stocks, and where necessary associated or dependent species, at levels consistent with previously agreed precautionary reference points. Such reference points shall be used to trigger pre-agreed conservation and management action. Management strategies shall include measures which can be implemented when precautionary reference points are approached.

5. Fishery management strategies shall ensure that the risk of exceeding limit reference points is very low. If a stock falls below a limit reference point or is at risk of falling below such a reference point, conservation and management action should be initiated to facilitate stock recovery. Fishery management strategies shall ensure that target reference points are not exceeded on average.

6. When information for determining reference points for a fishery is poor or absent, provisional reference points shall be set. Provisional reference points may be established by analogy to similar and better-known stocks. In such situations, the fishery shall be subject to enhanced monitoring so as to enable revision of provisional reference points as improved information becomes available.

7. The fishing mortality rate which generates maximum sustainable yield should be regarded as a minimum standard for limit reference points. For stocks which are not overfished, fishery management strategies shall ensure that fishing mortality does not exceed that which corresponds to maximum sustainable yield, and that the biomass does not fall below a predefined threshold. For overfished stocks, the biomass which would produce maximum sustainable yield can serve as a rebuilding target.
Report of the Secretary-General on oceans and the law of the sea, A/66/70, 22 March 2011
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Summary

The present report has been prepared pursuant to the request made by the General Assembly, in paragraph 167 of its resolution 65/37 A, that the Secretary-General include, in the annual report on oceans and the law of the sea, information on environmental impact assessments undertaken with respect to planned activities in areas beyond national jurisdiction, including capacity-building needs, on the basis of information requested from States and competent international organizations. The report also contains information on activities carried out by relevant organizations since the report of the Secretary-General of 19 October 2009 (A/64/66/Add.2), including with regard to the scientific, technical, economic, legal, environmental and socio-economic aspects of the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction. It also provides information on possible options and approaches to promote international cooperation and coordination and on key issues and questions where more detailed background studies would facilitate consideration by States of these issues.

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* A/66:50.
I. Introduction

1. Biological diversity (biodiversity) is vitally important for human well-being, since it underpins the wide range of ecosystem services on which life depends. The oceans are characterized by a great diversity in terms of physical features, ecosystems and life, ranging from shallow, near-shore ecosystems and species to the deepest and most remote features, such as trenches and abyssal plains, both within and beyond areas of national jurisdiction. While the specific role of some of these ecosystems is still poorly understood, it is generally recognized that marine ecosystems and biodiversity have critical functions in the natural cycle and in supporting life on Earth. Marine ecosystems and biodiversity, including beyond areas of national jurisdiction, also provide a source of livelihood for billions of people around the world.

2. Today, however, oceans and coasts are among the most threatened ecosystems in the world. In the context of the celebration of the International Year of Biodiversity in 2010, a number of reports showed that the 2010 target of achieving a significant reduction in the current rate of biodiversity loss as a contribution to poverty alleviation had not been met at the global level. Notwithstanding increased investment in conservation planning and action, the major drivers of biodiversity loss, including high rates of consumption, habitat loss, invasive species, pollution and climate change, are not yet being addressed on a scale sufficient to affect overall negative trends in the state of biodiversity.

3. No marine areas are unaffected by human activities, and almost half of them are strongly affected by multiple drivers of change. The demand for seafood continues to grow as the population increases. Wild fish stocks continue to come under pressure, and aquaculture is expanding. Climate change causes fish populations to be redistributed towards the poles, and tropical oceans become comparatively less diverse. Sea level rise threatens many coastal ecosystems. Ocean acidification weakens the ability of shellfish, corals and marine phytoplankton to form their skeletons, threatening to undermine marine food webs as well as reef structures. Increasing nutrient loads and pollution intensity the incidence of coastal dead zones, and globalization creates more damage from alien invasive species transported in ship ballast water.

4. The cumulative impacts of fishing, pollution and climate change are on the verge of causing substantial, albeit poorly understood, mass extinctions of marine biodiversity.

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1 Biological diversity is defined in article 2 of the Convention on Biological Diversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”


life, with consequent resource and security implications for human communities. The irreparable loss of biodiversity will hamper efforts to meet other development goals, especially those related to poverty, hunger and health, by increasing the vulnerability of the poor and reducing their options for development.

5. While the human activities and pressures on marine biodiversity continue to be at their most intense in coastal areas, a number of factors have spurred a rise in human activities farther away from the coast. These factors include a decline in — and in some cases the collapse of — shallow water fish stocks, the development of new technologies to explore and exploit seabed resources, the search for new alternative sources of energy, and the more stringent regulation of certain activities in areas within national jurisdiction. Growing scientific and commercial interest in areas heretofore largely unexplored are cumulatively affecting marine biodiversity and biological resources. The Census of Marine Life determined that in the past the disposal of waste and litter had had the greatest impacts in the deep sea. Today, fisheries, hydrocarbon and mineral extraction are having the greatest impacts. It has been predicted that climate change will have the greatest effects in future.

The expanded scientific understanding of ocean threats also illustrates how the isolated impacts of individual sectors become concentrated, move beyond enclosed areas and seas and interact synergistically, affecting not only the local species and human communities that are dependent on coastal ecosystems but also, and increasingly, the larger natural systems and human societies of which they form a part.

6. Cognizant of the richness and life-supporting functions of the oceans and their ecosystems, States, at the World Summit on Sustainable Development in 2002, committed to maintaining the “productivity and biodiversity of important and vulnerable marine and coastal areas, including areas within and beyond national jurisdiction”.

By paragraph 73 of its resolution 59/24, the General Assembly established the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. The Working Group was mandated to:

(a) survey the past and present activities of the United Nations and other relevant international organizations with regard to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction;
(b) examine the scientific, technical, economic, legal, environmental, socio-economic and other aspects of these issues;
(c) identify key issues and questions where more detailed background studies would facilitate consideration by States of these issues; and
(d) indicate, where appropriate, possible options and approaches to promote international cooperation and coordination for the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. The Working Group was assisted in its consideration of these issues by a report prepared by the Secretary-General pursuant to paragraph 74 of resolution 59/24 (A/60/63/Add.1). The report of the Working Group is contained in document A/61/65.

7. In 2006, in paragraph 91 of its resolution 61/222, the General Assembly requested the Secretary-General to convene, in accordance with paragraph 73 of resolution 59/24, a meeting of the Working Group in 2008 to consider: (a) the environmental impacts of anthropogenic activities on marine biological diversity beyond areas of national jurisdiction; (b) coordination and cooperation among States as well as relevant intergovernmental organizations and bodies for the conservation and management of marine biological diversity beyond areas of national jurisdiction; (c) the role of area-based management tools; (d) genetic resources beyond areas of national jurisdiction; and (e) whether there was a governance or regulatory gap, and if so, how it should be addressed. In its deliberations, the Working Group was assisted by a report of the Secretary-General prepared pursuant to resolution 61/222 (A/62/66/Add.2). The outcome of the 2008 meeting is set out in document A/63/79 and Corr.1.

8. In 2008, in paragraph 127 of its resolution 63/111, the General Assembly requested the Secretary-General to convene, in accordance with paragraph 73 of resolution 59/24 and paragraphs 79 and 80 of resolution 60/30, a meeting of the Working Group in 2010 to provide recommendations to the Assembly. This request was reiterated in paragraph 146 of resolution 64/71. In paragraph 142 of resolution 64/71, the Assembly noted the discussion on the relevant legal regime on marine genetic resources in areas beyond national jurisdiction in accordance with the United Nations Convention on the Law of the Sea, and called upon States to further consider this issue in the context of the mandate of the Working Group with a view to making further progress on the issue. The Assembly also invited States to further consider, at the 2010 meeting of the Working Group, in the context of its mandate, issues of marine protected areas and environmental impact assessment processes. In its deliberations, the Working Group was assisted by a report of the Secretary-General prepared pursuant to resolution 63/111 (A/64/66/Add.2). The recommendations of the Working Group address: the strengthening of the information base; capacity-building and technology transfer; cooperation and coordination for integrated ocean management and ecosystem approaches; environmental impact assessments; area-based management tools, in particular marine protected areas; marine genetic resources; and the way forward. The recommendations, together with the Co-Chairpersons’ summary of discussions, are contained in document A/65/68.

9. In paragraph 162 of its resolution 65/37 A, the General Assembly endorsed the recommendations of the Working Group. The Assembly also requested the Secretary-General to convene, in accordance with paragraph 73 of resolution 59/24 and paragraphs 79 and 80 of resolution 60/30, with full conference services, a meeting of the Working Group, to take place from 31 May to 3 June 2011, to provide recommendations to the General Assembly. The recommendations of the Working Group address: the strengthening of the information base; capacity-building and technology transfer; cooperation and coordination for integrated ocean management and ecosystem approaches; environmental impact assessments; area-based management tools, in particular marine protected areas; marine genetic resources; and the way forward. The recommendations, together with the Co-Chairpersons’ summary of discussions, are contained in document A/65/68.


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7 See note 2 above.
11 Resolution 65/37 A, para. 163.
A. Marine science and technology

12. While increased efforts are being made to develop our knowledge and understanding of marine ecosystems, the limited amount of scientific knowledge of areas beyond national jurisdiction means that the extent of impacts on and the productivity limits and recovery time of ecosystems in those areas cannot be predicted. The UN General Assembly resolution 65/115, which calls for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, reflects increasing concern about the state of marine biodiversity beyond areas of national jurisdiction. The view was expressed that increased scientific research on the deep and open oceans, which are the least-known areas, was particularly necessary (A/65/68, para. 31).

13. While increased efforts are being made to develop our knowledge and understanding of marine ecosystems, the limited amount of scientific knowledge of areas beyond national jurisdiction means that the extent of impacts on and the productivity limits and recovery time of ecosystems in those areas cannot be predicted. The UN General Assembly resolution 65/115, which calls for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, reflects increasing concern about the state of marine biodiversity beyond areas of national jurisdiction. The view was expressed that increased scientific research on the deep and open oceans, which are the least-known areas, was particularly necessary (A/65/68, para. 31).

14. The information contained in the present section is based mainly on contributions received from States on Parts VII and XI of the Convention. It is aimed at providing a basis for discussion at the Working Group, taking into account the views of States on Parts VII and XI of the Convention, with a view to making further progress on this issue (para. 165), and may be useful when preparing for future international meetings of the Working Group on the conservation and sustainable use of marine biodiversity. The information contained in the present section is also based on contributions from a number of international organizations and stakeholders, including, inter alia, the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the International Seabed Authority (the Authority), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the Convention on Biological Diversity (CBD), the UN Secretariat, and the Secretariat of the Agreement on the Conservation of Cetaceans of the Western North Atlantic (ACCOCA). The information contained in the present section is also based on contributions from a number of international organizations and stakeholders, including, inter alia, the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the International Seabed Authority (the Authority), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the Convention on Biological Diversity (CBD), the UN Secretariat, and the Secretariat of the Agreement on the Conservation of Cetaceans of the Western North Atlantic (ACCOCA).
14. The essential role of scientific knowledge as a basis for sound decision-making and the need to strengthen the linkages between research and policymaking were highlighted at the meeting of the Working Group in 2010 (A/65/68, para. 35). The Working Group recommended that States and competent international organizations conduct further marine scientific research and develop and strengthen mechanisms that facilitate the participation of developing countries in marine scientific research (A/65/68, paras. 4 and 5). Furthermore, the Working Group recommended that States and competent international organizations use the best available scientific information in the development of sound policy (A/65/68, para. 3). It also recommended that the General Assembly recognize the need to consolidate and harmonize data, as appropriate, including by improving the functional links among databases (A/65/68, para. 6). The Assembly subsequently endorsed those recommendations.16

15. Examples of recent activities in the area of marine science and technology relevant to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction are presented below.

1. Marine science

16. In its resolution 65/37 A, the General Assembly called upon States, individually or in collaboration with each other, to continue to strive to improve understanding and knowledge of the oceans and the deep sea, including the extent and vulnerability of deep sea biodiversity and ecosystems, by increasing marine scientific research in accordance with the United Nations Convention on the Law of the Sea (para. 187).

17. A number of marine scientific research projects have been carried out by States at the international and regional levels. In addition, China reported that in 2010, in accordance with the relevant provisions of its contract with the Authority as a pioneer investor, the China Ocean Mineral Resources Research and Development Association had conducted oceanographic and environmental-baseline research, and that it had also carried out analysis and testing of materials and samples gathered on-site in the contract area in 2009. It investigated such phenomena as the size-fractionated structure of chlorophyll a, the abundance and species configuration of small benthic organisms, the composition and origin of low-density phosphates and suspended particulate mineral matter, and the distribution and output of surface biogenic particulate matter. The Association also performed biological and chemical baseline research. Moreover, China also cooperates with the Authority by providing experts for the project on a geological model for the Clarion-Clipperton Fracture Zone.17

18. A sustained research effort in support of decision-making was represented by the decade-long Census of Marine Life, a partnership of 2,700 scientists from more than 80 States, the results of which were published in October 2010.18 By sampling the full range of marine taxa from pole to pole and from surface to abyssal depths, the Census has discovered many new species and previously unknown habitats, especially in the deep sea and coral reefs.19 The Census has drawn baselines to assist States in selecting areas and strategies for the greater protection of marine life. Furthermore, in addition to the Ocean Biogeographic Information System,20 the Census spurred the establishment of various databases and visualizations.21

19. Nevertheless, at the conclusion of the Census, it was estimated that in well-researched regions of high species richness, 25 to 80 per cent of species remained undescribed. The Census database still had no records, for more than 20 per cent of the ocean's volume, and very few for vast areas.22 Marine scientists remain unable to provide good estimates of the total number of species in any of the three domains of life in the oceans (Archaea, Bacteria and Eukarya).23 The Census noted, inter alia, that developing monitoring strategies through existing observing systems, time-series stations and long-term ecological research sites may enable the prediction of changes in microbial populations as a consequence of natural and anthropogenic climate change, harmful algal blooms and, ultimately, human impact on biodiversity in the oceans.24 In its summary of the results for decision-makers, the Census summarized the discoveries, tools and technologies that are most relevant to policymakers, resource managers and Government officials. It also discussed findings about marine habitat degradation and rehabilitation.25

20. The secretariat of IOCs, in its contribution, suggested the use of proxies and remote observations to infer the distribution and abundance of habitats and biodiversity as one possible methodology for addressing biodiversity conservation. For example, statistical proxies and components could be obtained from oceanographic parameters acquired within the framework of the Global Ocean Observing System and the Oceanic Biogeographic Information System and from the Global Open Oceans and Deep Seabed Biogeographic Classification System.26 That classification system could assist in gaining an understanding of the scales for applying an ecosystem approach to area-based management and identifying areas representative of major ecosystems. Biogeographic classification systems are hypothesis-driven exercises that are intended to reflect biological units with a degree of common history and coherent response to perturbations and management actions.27 Another recognized proxy for the existence of biodiversity hotspots is sea floor topology, structure and complexity of cover, which can be obtained by remote sensing and detailed sea floor acoustic mapping. The Global Ocean Observing System has focused on global climate monitoring in the open oceans, but is now actively integrating new biogeochemistry and ecosystem variables.28

16 Resolution 65/37 A, para. 162.
17 Contribution of China. See also ISBA/16/A.2.
20 The Ocean Biogeographic Information System maintains the Census dataset. See http://www.iobis.org.
21 See, for example, the Microbial Oceanic Biogeographic Information System database, available at http://icom.oce.unesco.org/microbis, as well as www.comlmaps.org for maps and visualizations of Census data and information.
23 See A/60/63/Add.1, paras. 13-57.
24 See note 19 above.
25 See note 8 above.
28 See A/65/69/Add.2, para. 136.
21. UNDP, in its contribution, reported on the first comprehensive biological survey ever conducted on the pelagic ecosystems associated with biodiversity hotspots around five seamounts located in areas beyond national jurisdiction in the southern Indian Ocean. The Seamounts Project was begun in 2009 and is managed by the International Union for the Conservation of Nature (IUCN) and funded by the Global Environment Facility (GEF). It focuses on seamount ecosystems known to be hotspots of biodiversity on the Southwest Indian Ocean Ridge with the aim of improving scientific understanding of seamount ecosystems and building capacity; enhancing governance frameworks for high seas resources conservation and management; identifying management and compliance options for deep and high seas biodiversity in the southern Indian Ocean, based on precautionary and ecosystem approaches; and raising awareness and sharing knowledge. To date, nearly 7,000 samples have been gathered. The ongoing taxonomic analysis has identified more than 200 species of fish and 74 species of squid. Another important finding indicated that the convergence zone between the warm tropical waters of the North and the cold waters of the Southern Ocean might be a very important area for juvenile fish, and might therefore require concentrated conservation efforts.

22. At the regional level, recent activities and research have focused on providing scientific advice to management bodies. For example, in support of established marine protected areas, the Commission for the Conservation of Antarctic Marine Living Resources supported such actions as the collation of data to characterize biodiversity and ecosystem processes, physical environmental features and human activities, the development of a vulnerable marine ecosystem taxon classification guide, data-quality monitoring and the development of trigger levels for vulnerable marine ecosystem taxa.

23. For the protection of corals and sponges in the NAFO regulatory area, benthic survey missions have provided evidence enabling NAFO to close areas within its fishing footprint to protect sea pens, sponges and gorgonian corals (see para. 179 below). In 2009 and 2010, NAFO Potential Vulnerable Marine Ecosystem — Impacts of Deep-Sea Fisheries Programme multidisciplinary surveys were conducted to examine fishing resources and vulnerable marine ecosystems in the regulatory area.

2. Marine technology

24. At its 2010 meeting, the Working Group recommended, inter alia, that the General Assembly recognize the need to make progress in the implementation of the provisions of the United Nations Convention on the Law of the Sea on the development and transfer of marine technology and, in that context, that States and competent international organizations apply and implement the Criteria and Guidelines on the Transfer of Marine Technology adopted by the Assembly of the Intergovernmental Oceanographic Commission of the UNESCO in 2003 (A/65/68, para. 10). The General Assembly subsequently endorsed that recommendation.

25. Previous reports of the Secretary-General have provided information on technological issues, including on technologies which may be used to enhance the range and reach of information-gathering instrumentation. The Census of Marine Life emphasized that in order to access the deep sea, the use of new technologies was of the utmost importance. It noted that the analysis of data was greatly enhanced by advances in digital processing, network databases and visualization. Geophysical and high resolution tools that can discriminate seabed type (mud, sand, rock) and allow the characterization of ecological features (coral mounds, outcropping methane hydrate, etc.) were used to classify and map habitats over large areas. The Census highlighted, however, the need to continue developing new technologies to access the global oceans and deep sea, particularly with regard to improving the rates of exploration and discovery.

26. Technological developments that have pushed the limits of the unknown and the unexplored have occurred recently. The Challenger Deep, in the Mariana Trench was reached for the third time in 2009, by the Nereus. In a wide variety of sectors, interest has recently increased in deep sea submersibles, with China becoming the fifth State, alongside France, Japan, the Russian Federation and the United States of America, to achieve dives to a depth of 3,500 m.

27. Similarly, the frontier with regard to deep extractions of hydrocarbons continues to be extended. While regular extraction is performed in water depths of 1,500 m to 2,000 m, the Perido platform in the Gulf of Mexico is moored in approximately 2,450 m of water. Setting new records in terms of depth of extraction, the platform facility also includes the Tobago subsea well, in approximately 2,925 m of water. However, increasing resource extraction from the deep sea floor raises questions relating to security, including that of the underwater facilities, and to the safety of the personnel operating such facilities.

28. The continuous development of marine renewable energy (see sect. II.H.3 below) has elicited concerns about the possible impact of electromagnetic fields created by tidal- and wave-powered generators and power cables on species that are known to use natural fields for guidance.

B. Fishing activities and developments related to marine living resources

29. Fisheries and aquaculture play a vital role in the economy and sustainable development of many countries. FAO has reported that capture fisheries and aquaculture production in 2008 was approximately 142 million tons, of which 33. See A/65/9/Add.2, paras. 161-164.
34. See note 19 above.
35. The Challenger Deep, which is located at the southern end of the Mariana Trench, is the deepest known point in the oceans, with a depth of 10,911 m.
36. A/64/66/Add.1, para. 166.
39. See www.shell.com/home/content/aboutshell/our_strategy/major_projects_2/perdido/overview.
marine capture production was 79.5 million tons. Almost 81 per cent of world fish production was destined for human consumption and provided 3 billion people with at least 15 per cent of the animal protein in their diets. The share of fishery and aquaculture production entering international trade increased from 25 per cent in 1976 to 39 per cent in 2008, and world exports reached a record value of $102 billion.  

30. Fishing activities continue to have adverse impacts on marine biodiversity in areas within and beyond national jurisdiction owing, in particular, to overfishing, illegal, unreported and unregulated fishing, destructive fishing practices, by-catch and discards.  

The proportion of marine fish stocks estimated to be underexploited or moderately exploited declined from 40 per cent in the mid-1970s to 15 per cent in 2008, whereas the proportion of overexploited, depleted or recovering stocks increased from 10 per cent in 1974 to 32 per cent in 2008. Of that 32 per cent, it was estimated that 28 per cent were overexploited, 3 per cent were depleted and 1 per cent were recovering from depletion.  

31. Particular concerns have been raised regarding the overexploitation of some straddling fish stocks, highly migratory fish stocks and other fisheries resources in the high seas.  

Of the 23 tuna stocks monitored by FAO, up to 60 per cent are more or less fully exploited and up to 35 per cent are overexploited or depleted.  

32. A number of specific initiatives have been taken to address the impact of fisheries activities on the marine environment, as set out below.  

1. Illegal, unreported and unregulated fishing  

33. Illegal, unreported and unregulated fishing is a global problem which occurs in virtually all capture fisheries, including beyond areas of national jurisdiction. Attention has been drawn to the need for States to eliminate subsidies that contribute to illegal, unreported and unregulated fishing, adopt market-related measures to prevent illegally harvested fish or fish products from entering the commercial market, ensure compliance with conservation and management measures, share information and practices to strengthen enforcement and improve measures to monitor and regulate transshipment. Further efforts are also needed in the preparation of national plans to combat illegal, unreported and unregulated fishing, as called for by the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. FAO has reported difficulties relating to the number of non-reporting fishing countries, which has increased, as well as a worsening of the quality of capture statistics.  

34. The FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, which was adopted in 2009, has been identified as a significant tool to combat illegal, unreported and unregulated fishing. In resolution 65/38, the General Assembly encouraged States to consider ratifying, accepting, approving or acceding to the instrument with a view to its early entry into force. With regard to flag State performance, the Assembly has urged States and regional fisheries management organizations and arrangements to develop appropriate processes to assess the performance of States and has encouraged further work, including by FAO, on the development of guidelines on flag State control of fishing vessels.  

35. It is envisaged that the global record of fishing vessels, refrigerated transport vessels and supply vessels under development within FAO will be a global repository that will permit the reliable identification of vessels authorized to engage in fishing or fishing-related activity. An FAO technical consultation on the development of the global record was held in November 2010. At its twenty-ninth session, held from 31 January to 4 February 2011, the FAO Committee on Fisheries recognized that the global record should be developed as a voluntary initiative with a phased approach to implementation, and in a cost-effective manner, taking advantage of existing systems and technologies.  

36. Regional fisheries management organizations and arrangements continue to take measures to combat illegal, unreported and unregulated fishing, including through the use and exchange of illegal, unreported and unregulated vessels lists, 100 per cent observance, vessel monitoring systems, vessel registries, port control measures and the prohibition of transshipment at sea.  

2. By-catch and adverse impacts on marine biodiversity  

37. Despite emphasis given to by-catch and discards in the FAO international plans of action on seabirds and sharks and the Guidelines to Reduce Sea Turtle Mortality in Fishing Operations, problems persist with high levels of unwanted and often unreported by-catch and discards in many fisheries around the world. These catches often include the capture of ecologically important species and...
A global database of information relevant to vulnerable marine ecosystems is being developed, and user-friendly species identification guides will be published to assist in improving information on deep-sea species. These issues have been addressed by IMO, including in the context of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978, entered into force on 1 January 2000.

41. Significant among the actions taken by the international community has been the adoption, in 2008, of the FAO International Guidelines for the Management of Subsidiary Substances Carried by Sea in Packaged Form, which are expected to enter into force in 2014.

42. Shipping activities

1. Oil pollution and other discharges

3. Adverse impacts of bottom fisheries

40. At its sixty-sixth session in 2011, the General Assembly will conduct a review of the implementation of the measures and to make further recommendations, where necessary. In order to assist the Assembly in its review, the Secretaries-General is preparing a report on the actions taken by States and regional fisheries management organizations and arrangements in response to resolutions 61/105 and 64/172 to address the impacts of bottom fishing on vulnerable marine ecosystems, in particular sea turtles, seabirds and marine mammals (see section II.J.2 below).

43. Shipping is the least environmentally damaging form of commercial transport and is a comparatively minor contributor to marine pollution. However, shipping activities are an important capacity-building tool for oil-spill prevention, planning, preparedness and salvage, including in areas beyond national jurisdiction.

44. The implementation of measures to prevent, reduce and control pollution of the marine environment by ships, in particular petroleum pollution, is an important element of the FAO Code of Conduct for Responsible Fisheries. The Committee also adopted revised sections of the IMO Manual on Oil Pollution in the light of the expected entry into force of amendments to MARPOL 73/78 annex I on 1 January 2014.
45. With regard to the prevention of pollution by sewage, the Marine Environment Protection Committee approved draft amendments to MARPOL 73/78 annex IV to include the possibility of establishing special areas that ban the discharge of sewage from passenger ships. The amendments will be considered for adoption at the forthcoming session of the Committee in July 2011. In addition, the Committee approved draft amendments to revise and update MARPOL 73/78 annex V regulations on the prevention of pollution by garbage from ships, with a view to adoption at its sixty-second session. The amendments include a general prohibition on the discharge of garbage into the sea, except in accordance with regulations, and the addition of discharge requirements for animal carcasses.

2. Air pollution

46. The release of air pollutants into the atmosphere can lead to the build-up of acidic compounds and the release of acid rain over long distances, which can impact marine biodiversity. At its sixty-first session, in October 2010, the Marine Environment Protection Committee adopted a new set of guidelines for monitoring the worldwide average sulphur content of residual fuel oils supplied for use on-board ships, in order to expand the monitoring programme to all petroleum fuel types covered by revised MARPOL 73/78 annex VI, on reduction in emissions of sulphur oxides, nitrogen oxides and particulate matter from ships.

3. Greenhouse gas emissions

47. In previous reports, the Secretary-General reported on the second IMO greenhouse study, undertaken in 2009. IMO is of the view that it should be entrusted with the development and enactment of global regulations on the control of greenhouse gas emissions from ships engaged in international trade, and has reported in this regard to the bodies of the United Nations Framework Convention on Climate Change.

48. At its sixty-first session, the Marine Environment Protection Committee continued to discuss the reduction of greenhouse gas emissions from international shipping, including a proposal to amend MARPOL 73/78 annex VI to make mandatory for new ships the energy efficiency design index and the ship energy efficiency management plan, which are currently voluntary. Following a request by a number of States parties to MARPOL 73/78 annex VI, the proposed amendments will be considered at the sixty-second session of the Committee in July 2011. The regulations would represent the first ever mandatory efficiency standard for an international transport sector.

49. The Committee also discussed how to promote market-based measures. A wide range of measures were reviewed, including a proposed levy on carbon dioxide emissions from international shipping, or from ships not meeting energy efficiency requirements. The Committee agreed on terms of reference for an intersessional working group, which will report to the sixty-second session on the need for and purpose of market-based measures as a possible mechanism to reduce greenhouse gas emissions from international shipping, among other issues.

4. Chemical pollution

50. The International Convention on the Control of Harmful Anti-fouling Systems on Ships, which entered into force in 2008, currently has 49 parties, representing approximately 75.29 per cent of the world’s gross tonnage. Such systems are used to prevent sea life, such as algae and molluscs, from attaching to the hull and thereby slowing the ship and increasing fuel consumption, but the chemicals used in the application of such systems can adversely impact marine biodiversity. At its sixty-first session, the Marine Environment Protection Committee adopted guidelines for the survey and certification of anti-fouling systems on ships, which revise and revoke the 2002 guidelines, and provide procedures for surveys to ensure compliance with the Convention.

D. Disposal of wastes

51. Previous reports of the Secretary-General have highlighted important decisions adopted in the framework of the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Convention) and its 1996 Protocol (the London Protocol) on matters of relevance to the conservation and sustainable use of marine biodiversity, including beyond areas of national jurisdiction (see sects. II.1.2 and II.1.3 below).

52. The thirty-second Consultative Meeting of Contracting Parties to the London Convention and the fifth meeting of Contracting Parties to the London Protocol, held in October 2010, took note of the approval by the Marine Environment Protection Committee at its sixty-first session of proposed amendments to MARPOL 73/78 annex V (see sect. C above) concerning the inclusion of animal carcasses as waste.
a garbage type to be regulated, where the animals had been carried on board as live cargo.92

E. Land-based activities

53. Human activities on land are critical to the socio-economic development of countries. However, it has been estimated that as much as 80% of marine pollution originates from land-based activities, from sources such as agriculture, industry and urban waste. Although the effects of this pollution are predominantly felt in coastal areas, pollution from land-based sources can also negatively impact biodiversity beyond areas of national jurisdiction.93 For example, heavy metals such as mercury are dangerous pollutants which can enter the marine food chain and bioaccumulate.94 High levels of mercury have been identified in highly migratory species of fish, such as tuna, as well as in different species of marine mammals.

54. The third session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities is tentatively scheduled to be held in November 2011. The session will be aimed at strengthening and building strategic partnerships for coastal and marine protection and at reaching agreement on a series of five-year multilateral and multi-stakeholder action plans on mainstreaming the objectives of the Global Programme of Action at the national and subnational levels.95

55. The second of five planned sessions of the intergovernmental negotiating committee to prepare a global legally binding instrument on mercury was held in January 2011.96

56. At the regional level, efforts to address land-based sources of pollution were considered by the twelfth Global Meeting of the Regional Seas Conventions and Action Plans, held in September 2010.97 The 1999 Protocol concerning Pollution from Land-based Sources and Activities to the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region came into force on 11 July 2010. The Protocol provides a regional framework by setting forth general obligations, including establishing legally binding effluent limitations for domestic sewage, and developing plans for the reduction and control of agricultural non-point sources.98

F. Mineral exploration and exploitation

57. Although the potential for seabed mineral mining operations is significant, mining activities in the deep sea are still largely prospective, as a number of factors, mainly of an economic and technological nature, affect the feasibility of deep-sea mining.99 The main potentially exploitable sources of deep-sea minerals are found in polymetallic manganese nodules, polymetallic sulphides and cobalt-ricferromanganese crusts.

58. The regulations on prospecting and exploration for polymetallic nodules in the Area100 and the regulations on prospecting and exploration for polymetallic sulphides in the Area101 provide for the application by the Authority and sponsoring States of the precautionary approach in the conduct of exploration in the Area, in order to ensure effective protection of the marine environment from harmful effects which may arise from activities in the Area. The sulphides regulations include provisions on the management of risks to biodiversity, including to vulnerable marine ecosystems.102

59. In November 2010, the secretariat of the Authority convened a workshop to further review the proposal and obtain the best possible scientific and policy advice on the formulation of an environmental management plan for the Clarion-Clipperton zone (see sects. II.J.2 and II.J.3 below). The proposal will be reviewed by the Legal and Technical Commission during the seventeenth session of the Authority in July 2011. While it is not yet known when exploitation will begin, the development of an environmental management plan reflects the need to be proactive in order to promote environmentally responsible seabed mining.103

G. Research on, and exploitation of, marine genetic resources

60. Previous reports of the Secretary-General have provided extensive information on the nature of marine genetic resources, features and organisms of interest in the search for marine genetic resources and the geography of the sampling effort. They have also addressed the scientific and commercial interests in marine genetic resources, technological issues, the valuation of the services provided by marine genetic resources, environmental aspects and legal issues.104

61. The results of the International Census of Marine Microbes, published in the context of the Census of Marine Life, have confirmed the importance to the biosphere and marine ecological processes of some of the smallest organisms.105 the value of the ecosystem services provided by coral reefs is estimated at more than

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95 UNEP, Progress report on the implementation of decision SS XI/7 on oceans (UNEP/GC.26/10).
97 See www.unep.org/regionalseas/globalmeetings.
100 Adopted on 13 July 2000 (ISBA/6/A/18).
101 Adopted on 7 May 2010 (ISBA/16/A/12/Rev.1).
102 Contribution of the Authority.
103 Ibid.
104 See A/60/63/Add.1, A/62/66 and Add.2 and A/64/66/Add.2.
105 See note 19 above.
$5 million per square kilometre per year, in terms of revenues from genetic material and bioprospecting. 109 The Economics of Ecosystems and Biodiversity report provided information on the dependency of a number of sectors on genetic resources. 107 Yet the Global Biodiversity Outlook concluded that the 2010 target of promoting the conservation of genetic diversity had not been achieved globally and that, while the genetic diversity of wild species was more difficult to ascertain, the overall decline of biodiversity presented in the Outlook strongly suggested that genetic diversity was not being maintained. 108

62. The importance of research on marine genetic resources for the purpose of enhancing the scientific understanding, potential use and application, and enhanced management of marine ecosystems continues to be recognized by the international community. 109 However, information on genetic diversity and the use of marine genetic resources, in particular those from areas beyond national jurisdiction, continues to be fragmentary. 110 In the context of the Census of Marine Life, the International Census of Marine Microbes drew attention to challenges in analysing an unprecedented volume of data from DNA sequencing. The computer algorithms and models required for more robust estimates of microbial diversity are still being developed, and the required computational power is still being sought. Greater attention must also be devoted to the improvement of taxonomy.

63. Issues related to genetic resources in areas beyond national jurisdiction continue to be the subject of joint work between UNESCO and the United Nations University, in particular with regard to their scientific, policy and legal aspects. 111 Recent work has focused on discerning the degree to which genetic resources from areas beyond national jurisdiction have contributed to commercial developments, such as patents applied for and granted. To date, it appears that a very small number of patents have originated from the seabed beyond national jurisdiction (generally related to deep-sea bacteria), while a greater number have been based on genetic resources from the high seas (primarily micro-organisms, floating sargassum weed, fish and krill). Of concern are applications with potentially large environmental consequences, such as the proposed use of sargassum weed for biofuels. The Institute of Advanced Studies of the United Nations University continuously updates the biological prospecting information resource tool (http://www.bioprospector.org/bioprospector/). 112

64. In the context of its activities related to biotechnology and the bioeconomy, the Organization for Economic Cooperation and Development continues to gather and provide valuable information and data on the economic and socio-economic aspects of biotechnology by means of seminars, workshops and publications. 113

65. With respect to policy developments, pursuant to a recommendation by the Ad Hoc Open-ended Informal Working Group at its 2010 meeting (A/65/68, para. 19), the General Assembly, in paragraph 165 of its resolution 65/37 A, noted the discussion on the relevant legal regime on marine genetic resources in areas beyond national jurisdiction in accordance with the United Nations Convention on the Law of the Sea, and called upon States to further consider this issue in the context of the mandate of the Working Group, taking into account the views of States on Parts VII and XI of the Convention, with a view to making further progress on this issue.

66. Jamaica, in its contribution to the report, indicated that it did not have legislation on marine genetic resources in areas beyond its national jurisdiction but was reliant on the Convention for the protection of its interests.

67. At the meeting of the Working Group, a number of delegations underlined the need to address implementation gaps in relation to marine genetic resources beyond areas of national jurisdiction. Notably, delegations highlighted the following practical measures: the promotion of marine scientific research; the development of codes of conduct for research activities; environmental impact assessments, including the development of guidance on assessments of impacts on marine genetic resources within the general environmental impact assessment process; the establishment of mechanisms for cooperation and the sharing of information and knowledge resulting from research on marine genetic resources, including by increasing the participation of researchers from developing countries in relevant research projects; the establishment of marine protected areas; discussions on practical options for benefit-sharing, including options for facilitating access to samples; and consideration of the intellectual property aspects of marine genetic resources beyond areas of national jurisdiction (A/65/68, para. 73).

68. At its tenth meeting, in October 2010, the Conference of the Parties to the Convention on Biological Diversity adopted the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity. 114 The objective of the Protocol is the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components (article 1). The Protocol applies to genetic resources within the scope of article 15 of the Convention, to traditional knowledge associated with genetic resources within the scope of the Convention, and to the benefits arising from the utilization of such resources and of such knowledge (article 3). Under the Protocol, parties are required to consider the need for, and modalities of, a global multilateral benefit-sharing mechanism to address the fair and equitable sharing of benefits derived from the utilization of genetic resources and traditional knowledge associated with genetic resources that occur in transboundary situations or for which it is not possible to grant or obtain prior informed consent. The benefits shared by users of genetic resources and traditional knowledge associated with genetic resources through this mechanism shall be used to support the conservation of biodiversity and the sustainable use of its components globally (article 10).

\[\footnotesize\text{109} \text{See note 5 above.}\]
\[\footnotesize\text{107} \text{See note 12 above. The report does not differentiate between terrestrial and marine genetic resources.}\]
\[\footnotesize\text{108} \text{See note 5 above.}\]
\[\footnotesize\text{109} \text{Resolution 65/37 A, paras. 168 and 169.}\]
\[\footnotesize\text{108} \text{See note 5 above.}\]
\[\footnotesize\text{111} \text{Contribution of UNESCO.}\]
\[\footnotesize\text{110} \text{Contribution of the Institute of Advanced Studies, UNU.}\]
\[\footnotesize\text{111} \text{Contribution of UNESCO.}\]
\[\footnotesize\text{112} \text{Contribution of the Institute of Advanced Studies, UNU.}\]
\[\footnotesize\text{113} \text{Contribution of UNESCO.}\]
\[\footnotesize\text{114} \text{Convention on Biological Diversity decision X/1 on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization.}\]
69. The FAO secretariat, in its contribution, indicated that, in response to General Assembly resolutions, a positive contribution might be expected from FAO, acting through the Commission on Genetic Resources for Food and Agriculture and the Committee on Fisheries, such as the development of elements for the Code of Conduct for Responsible Fisheries aimed at maintaining genetic diversity, including marine genetic resources, and fostering discussions on the equitable sharing of benefits.

70. The Third Intergovernmental Working Group established by the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of the World Intellectual Property Organization to address genetic resources was held from 28 February to 4 March 2011. The meeting produced a draft text on objectives and principles, which will be submitted to the next session of the Intergovernmental Committee, to be held in May 2011. The document contains five main objectives on conditions for access to, and use of, genetic resources, the prevention of erroneous patents, information systems to enable patent offices to make proper decisions in granting patents, the relationship between intellectual property and other relevant international agreements and processes, and the role of the intellectual property system in relation to genetic resources.

71. At the regional level, the thirty-third Antarctic Treaty Consultative Meeting, held in May 2010, continued to consider the issue of bioprospecting in the Antarctic region, based on several working and information papers, including a document presenting an overview of current research. That review had concluded that bioprospecting research in the Antarctic region and/or involving Antarctic organisms was extensive and widespread. Attention to bioprospecting in the Southern Ocean is reflected in a significant increase in the registration of patents associated with Antarctic marine life in recent years.

H. Other activities, including new uses

72. As the number and the intensity of maritime uses have increased, concerns have been raised over new uses of the marine environment, including ocean fertilization, carbon sequestration, the development of renewable energy, the laying of submarine cables and pipelines, deep-sea tourism and aquaculture. While these activities and uses could generate economic and socio-economic benefits, they could also adversely impact marine biodiversity, including beyond areas of national jurisdiction. The extent to which some of these activities take place beyond areas of national jurisdiction is not clear.

1. Ocean fertilization

73. A number of international statements, agreements and recommendations have been made in recent years concerning the potential impacts of ocean fertilization on the marine environment. In ocean fertilization, infertile waters are seeded with iron or other nutrients to enhance the growth of plankton and thereby increase the uptake of carbon dioxide by ocean waters.

74. The General Assembly, in paragraph 150 of its resolution 65/37 A, noted the adoption by the thirty-second Consultative Meeting of Contracting Parties to the London Convention and the fifth Meeting of Contracting Parties to the London Protocol, held in October 2010, of a resolution on the assessment framework for scientific research involving ocean fertilization. The meeting decided that scientific research proposals should be assessed on a case-by-case basis using the assessment framework (see sect. II.J.2 below).

75. The Contracting Parties further affirmed that the overall aim of their work was to provide a global, transparent and effective control and regulatory mechanism for ocean fertilization activities and other activities that fall within the scope of the London Convention and the London Protocol and have the potential to cause harm to the marine environment.

76. The tenth meeting of the Conference of the Parties to the Convention on Biological Diversity requested parties to implement decision IX/16 C, in which the Conference of the Parties had requested, in accordance with the precautionary approach, that ocean fertilization activities not take place until there was an adequate scientific basis on which to justify them.

2. Carbon sequestration

77. Carbon dioxide capture and sequestration is one of a portfolio of options to reduce levels of atmospheric carbon dioxide and mitigate the impact of climate change. Developments in technology have made it possible to capture carbon dioxide from industrial and energy-related sources, transport it and inject it into sub-seabed geological formations for long-term isolation from the atmosphere.

78. In its resolution 65/37 A, the General Assembly took note of the amendment to the London Protocol adopted by the fourth Meeting of Contracting Parties to the

1. For further information on ocean fertilization, see IOC, A Scientific Summary for Policymakers on Ocean Fertilization (2010). See also note by the Executive Secretary entitled “Scientific synthesis of the impacts of ocean fertilization on marine biodiversity” (UNEP/CBD/SBSTTA/14/INF.7).

2. A/63/63/Add.1, paras. 278-283, and compilation of recent international statements, agreements and recommendations regarding ocean fertilization (IMO document LC 30/INF.4 and Add.1).


6. Convention on Biological Diversity decision X/29 on marine and coastal biological diversity. See also decision X/33 on biodiversity and climate change.

7. Resolution LP.1 (1).
London Protocol, held in 2009, to allow the export of carbon dioxide streams for disposal into sub-seabed geological formations.127

79. The fifth meeting of Contracting Parties to the London Protocol adopted a workplan to conduct the review of the 2007 carbon dioxide Sequestration Guidelines in the light of the amendments to article 6 of the London Protocol,128 and instructed the London Protocol Scientific Group to start with this review in 2011, with a view to completion in 2012.129

3. Renewable energy

80. As a response to climate change, many States have initiated programmes for energy production from renewable resources. The oceans, a relatively unexploited source of energy, can be used to produce renewable energy from, inter alia, waves and tidal force,130 thereby contributing to sustainable development. If appropriately managed, such emerging oceanic activities could potentially benefit the marine environment and may even increase local biodiversity.131 However, increased use of the oceans for energy production could also have potential negative impacts on biodiversity, such as habitat loss, collision risk, noise and electromagnetic fields.132

81. Although investments in the marine energy sector still remain small compared with investments in other renewable energy technologies, there are indicators that the sector is growing.133 Furthermore, there is increasing interest in a wider range of possible technologies, including wave, tidal (barrages and turbines) and ocean thermal energy conversion systems.134 Initial deployments of significant offshore installations, for example wind turbines, have been located principally within the territorial sea.135 The current technological and logistical barriers to deploying offshore installations in deep waters and at great distances from the coast indicate that such projects are currently not viable beyond areas of national jurisdiction.136

82. However, States are beginning to recognize the importance and benefits of renewable energy sources, as evidenced by the founding of the International Renewable Energy Agency,137 whose statute entered into force in 2010. The mission of the Agency is to promote the widespread and increased adoption and sustainable use of renewable energy, taking into account, inter alia, the contribution of renewable energy to environmental preservation, through limiting pressure on natural resources and reducing deforestation and biodiversity loss. The statute also recognizes ocean energy, including tidal, wave and ocean thermal energy, as renewable sources of energy.

83. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea will focus its discussion on marine renewable energies at its thirteenth meeting, to be held in 2012.138

4. Submarine cables

84. Gaps in the existing legal regime with regard to submarine cables have recently been highlighted.139 A report on submarine cables prepared by the World Conservation Monitoring Centre of UNEP and the International Cable Protection Committee concluded that, in the deep ocean at depths of more than 1,000-1,500 m, evidence showed that the environmental impact of cables was neutral to minor and consistent with the one-time placement of the cables and infrequent, localized disturbances related to cable repairs. However, at shallower depths, disturbance was caused by the cable burial required.140

5. Tourism

85. It is generally acknowledged that the biggest danger facing most deep-sea vent ecosystems is physical damage caused by human activity. Because of the spectacular nature of these ecosystems, and their abundant animal life, there is a growing interest in deep-sea hydrothermal vents for tourism. Visits to vents, if they are not controlled, could have a negative impact on vent animals and their habitats. Marine biodiversity beyond areas of national jurisdiction can also be affected by tourist cruise ships. Such ships generate an average of 4,400 kg of waste a day; by comparison, cargo ships produce 60 kg and fishing vessels 10 kg. In addition, the anti-fouling hull paints used by cruise ships are believed to be responsible for
introducing harmful chemicals, including tributyltin, to pristine environments such as the Antarctic.  

86. Sustainable tourism development has been recognized as a means of achieving Millennium Development Goals, as it provides a host of employment opportunities. However, the potential negative impacts of tourism need to be carefully managed. 

87. In a 2009 assessment report, the Arctic Council noted that the increased use of Arctic waters for tourism, shipping, research and resource development increased the risk of accidents and, therefore, the need to further strengthen search and rescue capabilities and capacity around the Arctic Ocean to ensure an appropriate response to any accident. Tourism is also regulated in the Antarctic. No area, however remote, is therefore free from tourism activities and there is a need to pay careful attention to tourism developments in such areas.

6. Aquaculture  

88. Aquaculture is the fastest growing animal-food-producing sector and is poised to overtake capture fisheries as a source of food fish. While progress has been made over the past decade, aquaculture governance remains an issue in many countries owing to, inter alia, conflicts over marine sites, disease outbreaks and inadequate development. As the world’s population expands and capture fish stocks decline, aquaculture may play an increasingly important role in feeding humanity, including by expanding further offshore. 

89. Mariculture, considered to be a subset of aquaculture, is carried out in coastal waters in particular, with limited exposure to oceanic environment, but can have a significant impact on the sea bottom. Because some sites are overcrowded, increasing the risk of diseases, and sheltered inshore waters are often too shallow for fish farming, there is a need for farmers to move to more exposed areas, including in the open sea. Offshore mariculture refers to open-sea aquaculture, which takes place in waters exposed to the oceanic environment, including within the exclusive economic zone and beyond where the impact on the ocean bottom is thought to be minimal. 

90. However, concerns have been expressed over potential adverse impacts due to ecological, biological and chemical pollution. As a result, the FAO Sub-Committee on Aquaculture has recommended, inter alia, that FAO clarify the technical and legal terminology related to offshore aquaculture, assess the impacts of offshore aquaculture and analyse geographical distribution.

1 I. Activities to address cross-cutting impacts  

91. A number of problems facing the marine environment are cross-cutting in nature, being common to several activities at sea. These include the impacts of marine debris, invasive alien species, climate change and ocean noise, which have multiple sources and cumulative effects, with possible significant consequences to marine biodiversity beyond areas of national jurisdiction.

1. Marine debris  

92. Marine debris is an obvious sign of the impact of human activities on the marine environment and has negative economic impacts on fishing, shipping and tourism. Marine debris includes persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment, such as plastics, glass, metal, styrofoam, rubber and lost or discarded fishing gear. 

93. The majority of marine debris with sea- or ocean-based sources comes from oceangoing ships, offshore oil and gas platforms, drilling rigs and aquaculture installations. Marine debris also has land-based sources. 

94. Plastic debris in the oceans, in particular, has been highlighted by UNEP as an emerging environmental issue. As a result of its slow rate of degradation in the marine environment, which has been estimated to be in the range of hundreds of years, plastic debris continues to accumulate, while breaking down into smaller particles and microplastics. Moreover, concerns have been expressed regarding the potential impact of releases of persistent bioaccumulating and toxic compounds from such debris. 

95. Several common types of plastic are buoyant and transported by ocean currents into remote marine areas, including the Arctic and the Antarctic. Recently, attention has been drawn to high levels of accumulation of plastics and other debris in high seas convergence zones, also known as “ocean gyres”. Deep-water canyons also appear to be deposition sites for material from land-based sources. 

96. Concerns have also been expressed about abandoned, lost or otherwise discarded fishing gear, in particular its ability to continue to snare fish (often referred to as “ghost fishing”), with associated impacts on fish stocks, and potential impacts on endangered species and benthic environments, as well as its potential to become a navigational hazard at sea. FAO has outlined the impacts and causes of the problem, as well as possible preventive, mitigation and curative measures. 

97. The Fifth International Marine Debris Conference, sponsored by UNEP and the National Oceanic and Atmospheric Administration of the United States of America, held in March 2011, in Honolulu, Hawaii, discussed research advances and shared strategies and best practices to assess, reduce and prevent the impacts of marine debris. The Conference adopted the Honolulu Commitment, which, inter alia, establishes a cross-sectoral approach to help reduce the occurrence of marine debris. 

141 See A/59/62/Add.1, paras. 235 and 236. 
142 Arctic Council, Arctic Marine Shipping Assessment 2009. 
143 See http://www.ats.aq/e/ats_other_tourism.htm. 
144 See note 43 above. 
146 Ibid. 
147 Ibid. 

151 UNEP Yearbook 2011. 
152 Ibid. 
153 See note 43 above.
debris and calls for the development of a global strategy for the prevention, reduction and management of marine debris. 154

2. **Invasive alien species**

98. The introduction of invasive species, including through the exchange of ship ballast water, also remains a major concern. 155 For example in the Mediterranean, the failure to respond rapidly to the detection of Caulerpa taxifolia in 1984 enabled the marine alga to proliferate, with negative consequences for native phytothenos species, as well as for tourism and other commercial and recreational activities. 156 The unintentional introduction of invasive alien species can be caused by activities such as aquaculture, ocean research, tourism and sport fishing. 157

99. At its tenth meeting, the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary to work with other relevant bodies in order to better understand the management of invasive alien species in the marine and coastal environment. 158

100. With regard to ballast water, the 2004 International Convention for the Control and Management of Ships’ Ballast Water and Sediments, which has not yet entered into force, contemplates ballast water management through ballast water exchange or approved ballast water management systems. Other methods of ballast water management may also be accepted, provided that such methods ensure at least the same level of protection for the environment, human health, property or resources, and are approved in principle by the Marine Environment Protection Committee of IMO. 159

101. In order to expedite the process of evaluation of ballast water management systems, the Marine Environment Protection Committee adopted a framework for determining when it was appropriate to use the basic approval granted to one ballast water management system for another system using the same active substance or preparation. 160 The Committee also concurred with the conclusions of its ballast water review group that, for ships with a ballast water capacity of up to 5,000 m$^3$, including those constructed in 2011, there were sufficient technologies available to achieve the standard in the regulations of the Ballast Water Convention. 161 However, the Committee agreed that it would be necessary to undertake a new review of ballast water treatment technologies, focused on larger ships, at its sixty-second session. 162

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154 See www.gpa.unep.org.


156 See note 12 above.

157 See Convention on Biological Diversity decision X/38 on invasive alien species.

158 Ibid.

159 International Convention for the Control and Management of Ships’ Ballast Water and Sediments, annex, regulation B-3 (7).


161 IMO document MEPC 61/24, para. 2.29.

162 Ibid., para. 2.35.

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3. **Climate change**

102. Climate change is expected to result in increases in sea surface temperature, a global sea-level rise and decreases in sea-ice cover, as well as changes in salinity, wave conditions and ocean circulation. These impacts are likely to amplify natural variations and exacerbate existing stresses on marine resources and ecosystems. 163 Particular concerns have been expressed over ocean acidification and its impacts, which could alter species composition, disrupt marine food webs and ecosystems and potentially damage fishing, tourism and other human activities connected to the seas. 164

103. In the deep sea, alterations in sea temperatures could adversely affect the biological functioning of seamount organisms, and warmer waters could reduce the overall primary productivity within the oceans, leading to a decrease in the organic matter that falls to the seabed and supplies deep sea species with nutrients. 165 In the tropics, warmer air and water temperatures and rising sea levels could drive species from tropical habitats to subtropical regions. 166

104. Actions to address the impacts of climate change on the oceans continue at all levels, including efforts to improve understanding of the nature of these impacts. 167 The tenth meeting of the Conference of the Parties to the Convention on Biological Diversity requested the Subsidiary Body on Scientific, Technical and Technological Advice to consider the impacts of ocean acidification on marine biodiversity and habitats as part of the programme of work on marine and coastal biological diversity. 168

105. The new strategic plan adopted by the Conference of the Parties (see para. 170 below) set a target of 2015 for the anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted by climate change or ocean acidification to be minimized, so as to maintain their integrity and functioning. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks would be enhanced through conservation and restoration, including the restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation. 169

106. The twentieth session of the FAO Committee on Fisheries considered issues relating to climate change impacts, adaptation and mitigation in the context of fisheries and aquaculture. 170 The Committee recommended that FAO continue efforts to keep member States informed of the implications of climate change for fisheries and aquaculture, with an emphasis on the ecological and economic resilience of fisheries and aquaculture operations and the communities that depend on them. 171

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165 Contribution of the secretariat of the Convention on Biological Diversity. See note 43 above.

166 See, for example, A/65/69/Add.2, paras. 373-392.

167 Convention on Biological Diversity decision X/13 on new and emerging issues.


169 See note 55 above.
on them. The Committee also encouraged the further development of the FAO road map for fisheries, aquaculture and climate change.171

4. Ocean noise

107. Human activities in the oceans are responsible for generating increasing levels of underwater noise, and there is growing concern regarding the potential threat to marine living resources posed by noise proliferation. Sources of anthropogenic ocean noise include commercial and non-commercial shipping, air guns used to carry out seismic surveys, military sonar, underwater detonations and construction, resource extraction and fishing activities. Offshore wind farms have also been identified as sources of noise, and other new technology to capture marine renewable energy may be additional sources (see sect. II.H.3 above). 172

108. The General Assembly has consistently addressed ocean noise through its annual resolutions on oceans and the law of the sea.173 In paragraph 186 of its resolution 65/37 A, the Assembly noted that ocean noise was a potential threat to living marine resources, affirmed the importance of sound scientific studies in addressing the matter, and encouraged further research, studies and consideration of the impacts of ocean noise on marine living resources. In resolution 65/38 on sustainable fisheries, the Assembly encouraged further studies, including by FAO, on the impacts of underwater noise on fish stocks and fishing catch rates, as well as associated socio-economic effects. 174

109. As requested by the General Assembly, the Division for Ocean Affairs and the Law of the Sea has continued to compile peer-reviewed scientific studies received from Member States and intergovernmental organizations, and has made them available on its website. 175

110. The tenth meeting of the Conference of the Parties to the Convention on Biological Diversity requested the Subsidiary Body on Scientific, Technical and Technological Advice to take into account, in the implementation of the programmes of work on protected areas and on marine and coastal biodiversity, the impact of ocean noise on marine protected areas. 176 It also requested the Executive Secretary, in collaboration with parties, other Governments, and relevant organizations, to compile and synthesize available scientific information on anthropogenic underwater noise and its impacts. 177

111. The impacts of ocean noise on fisheries resources were discussed at the twenty-ninth session of the FAO Committee on Fisheries. Various sources of ocean noise can have an impact on commercially important fish stocks. For example, noise generated by seismic air guns has been shown to reduce catch rates by 40 to 80 per cent, severely affecting the distribution and local abundance of fish stocks. Some studies have noted that catch rates do not seem to return to normal even days after the noise has abated. 178

112. At the regional level, the issue of anthropogenic noise and cetaceans was considered at the Fourth Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area,179 held in November 2010. The meeting strongly welcomed the report of its scientific committee on the impact of anthropogenic noise on cetaceans, as well as its associated guidelines. The guidelines include source-specific monitoring and mitigation measures aimed at reducing environmental impacts from high-power sonar, seismic surveys and air gun usage, coastal and offshore construction works, offshore platforms, playback sound exposure experiments and other sources of underwater noise. The secretariat of the Agreement is also developing a pilot project for the use of acoustic devices to limit interactions between cetaceans and seine fishing in the Mediterranean. 180

113. The secretariats of the Convention on Migratory Species of Wild Animals, the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas and the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) are currently investigating the development of a common set of guidelines for noise mitigation. 181

J. Management tools

114. A number of management tools in use within areas of national jurisdiction can also be used to achieve the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction. The implementation of those tools in areas beyond national jurisdiction requires taking into account a number of specificities, including of a legal, governance and environmental nature. Efforts and case studies are ongoing to consider ways in which available management tools can successfully be applied beyond areas of national jurisdiction, as outlined below.

1. Integrated management and ecosystem approaches

115. Integrated management and ecosystem approaches are essential to mitigate the cumulative impacts of sectoral activities taking place beyond areas of national jurisdiction. At its sixty-fifth session, the General Assembly continued to encourage States to cooperate and coordinate their efforts and take, individually or jointly, all

\[171\] Ibid.
\[173\] See, for example, resolutions 60/30, para. 84, 61/222, para. 107, 62/215, para. 120, 63/111, para. 141, and 64/71, para. 162.
\[174\] Resolution 65/38, para. 127.
\[175\] See www.un.org/depts/los/general_assembly/noise/noise.htm for a comprehensive list of peer-reviewed scientific studies.
\[176\] Convention on Biological Diversity decision X/13 on new and emerging issues.
\[177\] Convention on Biological Diversity decision X/29 on marine and coastal biodiversity.
\[178\] See note 55 above.
\[179\] The name of the Agreement was changed from “Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area” to reflect the expanded geographical scope of the Agreement as agreed in resolution A/4.1 of the Meeting of the Parties.
\[181\] See UNEP/CMS/S/C6/In.2/3, paras. 7-11; Sixth Meeting of the Parties to the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas, resolution No. 3, annex 1, para. 3; and OSPAR/BDC/10/2/2 Add.8.
measures, in conformity with international law, including the United Nations Convention on the Law of the Sea and other applicable instruments, to address impacts on marine ecosystems within and beyond areas of national jurisdiction, taking into account the integrity of the ecosystems concerned (resolution 65/37 A, para. 153). It also encouraged competent organizations and bodies that had not yet done so to incorporate an ecosystem approach into their mandates, in order to address impacts on marine ecosystems (resolution 65/37 A, para. 154).

116. At its last meeting, the Working Group recommended that States and competent international organizations work towards a more integrated and ecosystem-based approach to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, in order to strengthen cross-sectoral cooperation and effectively address sectoral and cumulative impacts (A/65/68, para. 13). This recommendation was subsequently endorsed by the General Assembly.182

117. The secretariat of the International Seabed Authority, in its contribution, noted that a challenge lay in adopting, implementing and keeping under review the rules, regulations and procedures of the Authority that embody an ecosystem-based management approach and an assessment of the impacts in order to manage risks to biodiversity. It also noted that the goals of the management plan for the Clarion-Clipperton Zone included the maintenance of regional biodiversity, ecosystem structure and ecosystem function, together with the application of the principles of integrated ecosystem-based management.

118. The IOC secretariat, in its contribution, drew attention to its Integrated Coastal Area Management initiative, established in 1998 to technically assist member States to implement ecosystem-based and integrated coastal area management. IOC is currently leading two marine components of the GEF medium-sized project to develop a transboundary waters assessment programme for large marine ecosystems and the open ocean. The open ocean programme will contribute to identifying threatening environmental issues in the open ocean and finding management solutions as well as translating science for policy. It is expected that the programme will also contribute to the Regular Process for global reporting and assessment of the state of the marine environment, including socio-economic aspects (the “Regular Process”).183

119. Progress has been made in applying ecosystem approaches to fisheries management. FAO is furthering the ecosystem approach to fisheries globally as a comprehensive and all-encompassing approach to sustainable fisheries within an ecosystem context. A number of regional and interregional workshops were held in 2009-2010, and a comprehensive toolbox for ecosystem approach to fisheries implementation is foreseen to be completed in 2011. Activities related to the ecosystem approach to fisheries have been identified by the FAO Committee on Fisheries as a high priority throughout the biennium 2012-2013. The FAO secretariat stressed the importance of impact assessments within an ecosystem approach (see sect. II.J.2 below).184

182 Resolution 65/37 A, para. 162.
184 Contribution of FAO.

120. At the regional level, work is ongoing in the context of NAFO to prepare terms of reference to support the road map for developing an ecosystem approach to fisheries for NAFO.185 The ecosystem and precautionary approaches to fishery management and principles for the effective conservation and management of fisheries resources have now been incorporated into the work of the Inter-American Tropical Tuna Commission and other regional fisheries management organizations and arrangements.186

121. In the Southern Ocean, the Commission for the Conservation of Antarctic Marine Living Resources supports working groups on ecosystem monitoring and management and on incidental mortality associated with fishing operations. Monitoring activities have been established to distinguish between changes associated with fishing activities as opposed to changes associated with environmental variability.187

122. The twelfth Global Meeting of Regional Seas Conventions and Action Plans identified ecosystem-based management as the most effective and least costly means of managing oceans and coasts.188

123. The quality status report published in 2010 for the North-East Atlantic shows that gaps in knowledge still need to be addressed, including overarching ecosystem assessments to support an ecosystem approach to the management of human activities. The 2010 ministerial meeting of the Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Commission), held in September 2010, endorsed a new North-East Atlantic environment strategy (2010-2020), which focuses on implementing an ecosystem approach and providing coordination for the implementation of the European Union Marine Strategy Framework Directive.189

124. An initiative launched in 2008 by the Coordinating Unit of the Mediterranean Action Plan aims to promote the application of an ecosystem approach to the management of human activities within the Barcelona Convention area.190

125. In the context of the large marine ecosystems programme, UNDP-GEF capacity-building projects in the Agulhas and Somali Current Large Marine Ecosystem and West Indian Ocean Seamounts made progress in transboundary diagnostic analyses and/or strategic action programmes, which represent multi-country commitments to legal, policy and institutional reforms to address transboundary environmental and marine resource concerns. Continued progress was made in filling ecosystem knowledge gaps through oceanographic assessments in the Agulhas and Somali Current Large Marine Ecosystem.191

185 Contribution of NAFO.
186 Contribution of the Inter-American Tropical Tuna Commission.
187 Contribution of the Commission for the Conservation of Antarctic Marine Living Resources.
189 Contribution of UNEP.
190 Ibid.
191 For further information, see www.unep.org/gef/portfolio/ww.html.
2. Environmental impact assessments

125. Available estimates indicate that the cost of preparing an environmental impact assessment rarely exceeds 1 per cent of the project costs. Costs in excess of that amount are unusual, particularly for public or non-profit projects in sensitive environments, or where good practice has not been followed. Additional costs may arise for assessments in a number of situations, such as translation and travel costs, and may also account for the complexity of the project or its impacts. Costs in excess of that amount are unusual, particularly for public or non-profit projects in sensitive environments, or where good practice has not been followed. Additional costs may arise for assessments in a number of situations, such as translation and travel costs, and may also account for the complexity of the project or its impacts.

126. The use of environmental impact assessments to support the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction is being increasingly supported. At its meeting in 2010, the Working Group recommended that the General Assembly recognize the importance of environmental impact assessments, in particular for the implementation of ecosystem and precautionary approaches, and recognize the importance of further developing scientific and management measures and the relevance of reports for decision-making. The General Assembly subsequently endorsed the recommendations of the Working Group.

127. One of the aims of environmental impact assessments is to inform decision-making by identifying the potentially significant environmental effects and risks of development proposals. In the long term, environmental impact assessments promote sustainable development by ensuring that development proposals do not undermine critical resource and ecological functions. The particular components of an environmental impact assessment process may vary under various instruments. However, most processes follow common steps: (a) screening to determine which projects or developments require a full or partial impact assessment; (b) scoping to identify which potential impacts are relevant to assess, and alternative solutions that avoid, mitigate or compensate adverse impacts; (c) assessment and evaluation of impacts and development of alternatives to avoid, mitigate or compensate adverse impacts; (d) decision-making on the project or not, and under what conditions; (e) monitoring and evaluation of the predicted impacts and proposed mitigation measures; and (f) compliance and enforcement as well as environmental auditing.

128. A previous report of the Secretary-General provided information on the nature and purpose of environmental impact assessments and their relation to strategic environmental assessments. The process involves components of environmental impact assessment including: (a) fact-finding; (b) data-gathering on the environmental background; (c) evaluation of options to avoid adverse impacts; (d) development of alternative solutions that avoid, mitigate or compensate adverse impacts; (e) decision-making on the project or not, and under what conditions; (f) monitoring and evaluation of the predicted impacts and proposed mitigation measures; and (g) compliance and enforcement as well as environmental auditing.

129. The proponents of an activity or project carry out the environmental impact assessment as a separate process, unrelated to the project cycle or the larger context of decision-making. In order to be effective, environmental impact assessments need a coherent policy-planning framework and systematic follow-up procedures. The environment's impact assessments undertaken beyond areas of national jurisdiction are often more challenging than those undertaken within national jurisdiction, particularly in addressing scale issues, including the need for intergovernmental cooperation.

130. Some of the key features of good assessment practice are public participation, transparency and credibility. The use of environmental impact assessments to support the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction is being increasingly supported. At its meeting in 2010, the Working Group recommended that the General Assembly recognize the importance of environmental impact assessments, in particular for the implementation of ecosystem and precautionary approaches, and recognize the importance of further developing scientific and management measures and the relevance of reports for decision-making. The General Assembly subsequently endorsed the recommendations of the Working Group.

131. In addition, most environmental impact assessment processes are applied at a section and do not require the assessment of cumulative impacts, as opposed to individual activities (A/63/66, paras. 53). The expert workshop on scientific and technical aspects relevant to environmental impact assessment in marine areas beyond national jurisdiction noted that the general aspects of the process are outlined in previous report of the Secretary-General (A/64/66/Add.2, para. 134).

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133. Additional information is provided below.

International instruments requiring environmental impact assessments

134. The 1994 Agreement relating to the Implementation of Part XI of the Convention on the Law of the Sea (articles 204-206), a number of international instruments provide for environmental impact assessments. Some of them apply in areas beyond national jurisdiction and are outlined in a previous report of the Secretary-General (A/64/66/Add.2, paras. 130 and 131).

135. In addition, most environmental impact assessment processes are applied at a section and do not require the assessment of cumulative impacts, as opposed to individual activities (A/63/66, paras. 53). The expert workshop on scientific and technical aspects relevant to environmental impact assessment in marine areas beyond national jurisdiction noted that the general aspects of the process are outlined in previous report of the Secretary-General (A/64/66/Add.2, para. 134).

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146. Additional information is provided below.
in the Area and the regulations on prospecting and exploration for polymetallic sulphides in the Area require that applications for approval of plans of work be accompanied by an assessment of the potential environmental impacts of the proposed activities and by a description of a programme for oceanographic and baseline environmental studies.\(^{203}\) In their annual reports to the International Seabed Authority, contractors must provide information on the implementation and results of their monitoring programmes and submit environmental baseline data. Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area were issued in 2001 and revised in 2010.\(^{204}\)

135. The Convention on International Trade of Endangered Species of Wild Fauna and Flora, which regulates four types of international trade (export, re-export, import and “introduction from the sea”\(^{205}\)), requires a finding from the State of introduction that the introduction will not be detrimental to the survival of the species involved. This non-detriment finding must be made before a certificate of introduction from the sea is granted for a specimen of a species listed in appendix I or II of the Convention.\(^{206}\) A scientific authority of the State of introduction must advise that such an introduction will not be detrimental to the survival of the species involved (article III, para. 5, and article IV, para. 6). With regard to species listed in appendix II, a scientific authority may prepare its advice in consultation with other national scientific authorities or, when appropriate, international scientific authorities (article IV, para. 7). The Standing Committee Working Group on Introduction from the Sea is currently developing a discussion document and revised resolution for consideration at the sixty-second session of the Standing Committee, to be held in 2012, and at the sixteenth meeting of the Conference of the Parties, to be held in 2013.\(^{207}\)

136. IMO has developed assessment guidelines to protect marine areas from the potential impacts of international shipping. The guidelines for the assessment of wastes and other matter that may be considered for dumping at sea (annex 1 to the London Protocol)\(^{208}\) include scoping and content provisions for an environmental impact assessment, based on annex 2 of the London Protocol. Annex 2 provides that applications to State party authorities for permits to dump wastes must be accompanied by an assessment of the sea disposal options, including information on waste characteristics, conditions at the proposed dump site, fluxes and proposed disposal techniques and specify the potential effects on human health, living resources, amenities and other legitimate uses of the sea.\(^{209}\)

137. In relation to ocean fertilization, resolution LC-LP.2 (2010) on the assessment framework for scientific research involving ocean fertilization, adopted by the Contracting Parties to the London Convention and the London Protocol (see sect. II.H.1 above), sets out criteria for the initial assessment of a proposal and detailed steps for completion of an environmental assessment, including risk management and monitoring. Every experiment, regardless of size or scale, is to be assessed in accordance with the framework. However, information requirements may vary according to the nature of each experiment.\(^{210}\)

138. At the regional level, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area provides, in its annex 2, for impact assessments to be carried out in order to provide a basis for either allowing or prohibiting the continuation or the future development of activities that may affect cetaceans or their habitat in the Agreement area, including fisheries, offshore exploration and exploitation, nautical sports, tourism and cetacean-watching, as well as establishing the conditions under which such activities may be conducted.

139. In accordance with the request contained in paragraph 167 of General Assembly resolution 65/37 A, the present section aims to provide information on environmental impact assessments undertaken with respect to planned activities in areas beyond national jurisdiction, including capacity-building aspects, on the basis of information requested from States and competent international organizations. Information on capacity-building needs is included in section III.B of the present report.

140. General application of environmental impact assessments. The European Union stated that information concerning assessments undertaken with respect to planned activities in areas beyond national jurisdiction, including capacity-building aspects, was still disperse and scarce. Some European Union States had reported that they did not carry out activities in areas beyond national jurisdiction, while in the case of those who may have carried out some activities in those areas there was no information on any environmental impact assessment undertaken, except where such assessments were compulsory under international agreements, rules of international organizations or European Union regulations.\(^{211}\)

141. Namibia reported, in its contribution, that it had not carried out any assessments as envisaged in paragraph 167 of General Assembly resolution 65/37 A, but that it had strict environmental provisions, in line with international standards, which made it mandatory for an assessment to precede any major project that might adversely impact the environment.

142. Norway stated that it was committed to cooperating through relevant regional and international forums to conduct environmental impact assessments with respect

\(^{203}\) 1994 Agreement, annex, section 1, para. 7; regulation 18 of the nodules regulations; regulation 20 of the sulphides regulations.

\(^{204}\) Article I, paragraph (e) of this Convention defines introduction from the sea as “transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State”. The Conference of the Parties, through resolution Conf. 14.6 (Rev. CoP15), has agreed that “the marine environment not under the jurisdiction of any State” means those marine areas beyond the areas subject to the sovereignty or sovereign rights of a State consistent with international law, as reflected in the United Nations Convention on the Law of the Sea.


\(^{207}\) Contribution of IMO.

\(^{208}\) Contribution of the European Union.
to planned activities in areas beyond national jurisdiction, where necessary, and to adopt the relevant management measures. It drew attention to the decisions and recommendations adopted by the ministerial meeting of the OSPAR Commission, held in September 2010, with respect to the establishment and management of six marine protected areas in areas beyond national jurisdiction in the North-East Atlantic (see para. 174 below), noting that those decisions had been based on environmental impact assessments conducted in the respective areas.212 The recommendations provide that, where appropriate, a human activity in the marine protected areas, or any measure outside those areas, which may potentially conflict with the conservation objectives of the area, should be subjected to an environmental impact assessment or a strategic environmental assessment.

143. The Islamic Development Bank stated that the environmental impact of projects financed by the Bank was carefully reviewed during the preparatory phase of financing.213

144. Fishing activities. Australia reported that the primary activity undertaken by Australian nationals, vessels and corporations in areas beyond Australia’s national jurisdiction was fishing, and environmental impact assessments were carried out in relation to fishing activities. Under Australia’s Environment Protection and Biodiversity Conservation Act 1999, management arrangements applying to Australian vessels fishing on the high seas are subject to periodic environmental assessments. All Australian fisheries that encompass fishing activities in areas beyond national jurisdiction214 have been subject to an assessment. Australia has also completed preliminary impact assessments, and is completing fuller impact assessments, in relation to bottom fishing activities by Australian flagged vessels in the South Pacific Regional Fisheries Management Organization (SPRFMO) area and the South Indian Ocean Fisheries Agreement Area. Australian fishing vessels that operate on the high seas within the area of the Commission for the Conservation of Antarctic Marine Living Resources are also subject to the necessary assessments.

145. New Zealand, in its contribution, drew attention to a 2008 report on the impact assessment of proposed bottom fishing activities by New Zealand vessels fishing in the high seas in the SPRFMO area during 2008 and 2009.215

146. Norway noted that it was a member of several regional fisheries management organizations and arrangements,216 some of which perform assessments of possible impacts from fishing activities in areas beyond national jurisdiction. Norway has also established national legislation with requirements for Norwegian fishers operating in areas governed by regional fisheries management organizations and arrangements, and it contributes to the regional assessments in the North Atlantic and the work of the International Council for Exploration of the Sea, which performs assessments of living marine resources.

147. Some of the States that contributed information to the report indicated that they would provide further information on their activities to assess the impacts of bottom fishing in the context of the report of the Secretary-General on the implementation of General Assembly resolutions 61/105 and 64/72.

148. The FAO secretariat stressed the importance of impact assessments within an ecosystem approach to fisheries and aquaculture. Such assessments are being completed by States and regional fisheries management organizations and arrangements in respect of deep-sea fisheries in the high seas as recommended in the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas. The FAO secretariat will continue to support the implementation of the Guidelines (see para. 41 above).217

149. At the regional level, the environmental impacts of tuna and tuna-like fisheries have been taken into account by the International Commission for the Conservation of Atlantic Tunas, which has adopted recommendations and resolutions in relation to shark species, turtles, seabirds and sargassum.218 The Commission secretariat reported that the objectives of the observer programmes219 include the careful assessment of the impact of tuna fisheries on other marine resources. Efforts towards monitoring of sea turtles, seabirds and marine mammals are under way to obtain better data on the impacts of high sea fisheries on these species. Measures to mitigate the impacts of fishing and reduce the mortality of albatrosses and other seabirds have been adopted.220 The Commission has also monitored the impact of tuna fisheries on several Atlantic pelagic shark species, including through the establishment of a species group on sharks which has, inter alia, conducted a risk assessment to assist the management of fisheries from an ecosystem perspective.221

150. NAFO adopted a map of existing fishing areas ("fishing footprint") in 2010, with areas outside being designated as new fishing areas. NAFO agreed to implement impact assessments for new exploratory fisheries that occur outside of its fishing footprint, if new scientific information becomes available on the existence of vulnerable marine ecosystems, or if significant changes occur in fishing conduct or technology. A working group of fishery managers and scientists on vulnerable marine ecosystems was established in 2008 to make recommendations to the Fisheries Commission on the effective implementation of measures to prevent significant adverse impacts on vulnerable marine ecosystems.222

151. The secretariat of the North-East Atlantic Fisheries Commission, in its contribution, reported that there had not been any reports of encounters with vulnerable marine ecosystems. Authorization to fish in "new" fishing areas had not yet been granted by any Contracting Party.

152. The secretariat of the Commission for the Conservation of Antarctic Marine Living Resources noted that the Commission continues to respond to the advice of

212 Contribution of Norway.
213 Contribution of the Islamic Development Bank.
214 These include the Eastern tuna and billfish, Western tuna and billfish, Western and Eastern skipjack tuna, Southern bluefin tuna and new and exploratory region of the fisheries in the Commission for the Conservation of Antarctic Marine Living Resources. Further information on the environmental assessment of Australian fisheries is available at www.environment.gov.au/coasts/fisheries.
216 For example, the North-East Atlantic Fisheries Commission, NAFO and the Commission for the Conservation of Antarctic Marine Living Resources.
217 Contribution of FAO.
218 Available at www.iccat.int/en/RecsRegs.asp.
219 See Commission recommendation 10-10.
220 Commission recommendation 07-07.
221 Contribution of the International Commission for the Conservation of Atlantic Tunas.
222 Contribution of NAFO.
its Scientific Committee in relation to approaches to avoid significant adverse impacts of fishing operations on vulnerable marine ecosystems. Supported actions include the development of risk assessment frameworks, footprint mapping for existing fisheries, mitigation options, notification procedures and guidelines for gear impact assessments.  

153. Prospecting for and exploration of mineral resources. China, in its contribution, reported that investigation and evaluation of the marine environment had been undertaken in relation to the area covered by the contract signed between the China Ocean Mineral Resources Research and Development Association and the International Seabed Authority in 2001. China has provided reports annually and review reports every five years, containing accounts of the investigations and evaluations (see para. 17 above).

154. The secretariat of the Authority stated that environmental impact assessments had become one of the most effective and practical tools to support sustainable development. It noted that by providing a regional environmental baseline and a better understanding of the ecosystem structures and functions in the representative network of areas of particular environmental interest, the proposed environmental management plan for the Clarion-Clipperton Zone might assist contractors in fulfilling their obligations with respect to the evaluation of impact assessments of their activities and the establishment of preservation and impact reference zones. It drew attention to the fact that one of the operational objectives of the proposed environmental management plan was to undertake cumulative environmental impact assessments, as necessary, on the basis of future exploitation proposals.

155. Other activities. Australia stated that it was not aware of any activities by Australian nationals, vessels or corporations in areas beyond national jurisdiction, other than fishing activities, to which the requirements of article 206 of the Convention would apply. Accordingly, no environmental impact assessments of non-fishing activities in areas beyond national jurisdiction had been undertaken. However, Australia noted that its Environment Protection and Biodiversity Conservation Act 1999, which applied to Australian nationals, vessels and corporations in areas within and beyond Australia’s national jurisdiction, provided a legal framework for environmental impact assessments.

156. Brazil, in its contribution, indicated that the first Brazilian Transatlantic Commission had been undertaken in 2009, enabling oceanographic scientific research in waters beyond areas of national jurisdiction in the South Atlantic. The objective of the Commission was to collect physical, chemical, biological and meteor-oceanographic environmental data that would support environmental impact evaluations in the future.

157. The secretariat of the Convention on Biological Diversity drew attention to decision X/29 of the tenth meeting of the Conference of the Parties, which requested the Executive Secretary to facilitate the development of voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments in marine and coastal areas using the guidance of the 2009 expert workshop (see paras. 131 and 132 above). Pursuant to this request, the secretariat is preparing the draft voluntary guidelines, which will be submitted for consideration to the Subsidiary Body on Scientific, Technical and Technological Advice, prior to the eleventh meeting of the Conference of the Parties. The Conference of the Parties also requested the Executive Secretary to collaborate with a number of organizations, processes and scientific groups towards the organization of a joint expert meeting to review the extent to which biodiversity concerns, including the impacts on marine and coastal biodiversity of pelagic fisheries of lower trophic levels, are addressed in existing assessments and propose options to address biodiversity concerns.

158. The IMO secretariat noted that while the guidelines for the assessment of wastes and other matter that may be considered for dumping at sea (see para. 136 above) apply in areas beyond national jurisdiction, in practice, most dumping licences are issued for disposal operations within the territorial sea or the exclusive economic zone of a coastal State. In relation to the assessment framework for scientific research involving ocean fertilization (see para. 137), the IMO secretariat noted that ocean fertilization experiments were primarily envisaged beyond areas of national jurisdiction where low-nutrient conditions prevail.

159. At the regional level, in its resolution on guidelines to address the impact of anthropogenic noise on cetaceans in the area of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area (see para. 112 above), the fourth Meeting of the Parties to the Agreement encouraged parties to address fully the issue of anthropogenic noise in the marine environment, including cumulative effects, in the light of the best scientific information available and taking into consideration the applicable legislation of the parties, particularly as regards the need for thorough environmental impact assessments being undertaken before granting approval to proposed noise-producing activities. It also mandated the secretariat of the Agreement, in collaboration with the Scientific Committee, to establish a common working group with the secretariats of the Convention on Migratory Species, the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas and the Pelagos Agreement in order to develop appropriate tools to assess the impact of anthropogenic noise on cetaceans and to further elaborate measures to mitigate such impacts and to coordinate efforts with other international bodies, in particular the Coordination Unit for the Mediterranean Action Plan, the Commission on the Protection of the Black Sea Against Pollution, the OSPAR Commission secretariat and IMO.

3. Area-based management tools, in particular marine protected areas

160. Area-based management, including the establishment of marine protected areas, has been recognized as an important tool for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction (see A/65/68, para. 58). Previous reports of the Secretary-General provide extensive information on this subject. The present section outlines recent developments.

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223 Contribution of the Commission for the Conservation of Antarctic Marine Living Resources.
224 See note 195 above.
225 Decision X/29 on marine and coastal biodiversity.
226 Contribution of IMO.
227 Fourth Meeting of the Parties, resolution 4.17.
(a) Identification of ecologically or biologically significant marine areas in need of protection

161. At its 2010 meeting, the Working Group recommended that the General Assembly call upon States to work through competent international organizations towards the development of a common methodology for the identification and selection of marine areas that might benefit from protection based on existing criteria, with a view to facilitating achievement of the 2012 target on establishing marine protected areas in the Plan of Implementation of the World Summit on Sustainable Development (A/65/68, para. 18). The General Assembly subsequently endorsed this recommendation,229 and further noted the work of States, relevant intergovernmental organizations and bodies, including the Convention on Biological Diversity, in the assessment of scientific information on, and compilation of ecological criteria for the identification of, marine areas that require protection (resolution 65/37 A, para. 178).

162. Work continues on the identification of ecologically or biologically significant marine areas in need of protection to support decision-making on the appropriate management measures, in particular in the context of the Convention on Biological Diversity. At its tenth meeting, the Conference of the Parties to the Convention on Biological Diversity noted that the application of the ecologically or biologically significant areas criteria was a scientific and technical exercise, that areas found to meet the criteria might require enhanced conservation and management measures, and that that could be achieved through a variety of means, including marine protected areas and impact assessments. The Conference of the Parties emphasized that the identification of ecologically or biologically significant areas and the selection of conservation and management measures was a matter for States and competent intergovernmental organizations, in accordance with international law, including the United Nations Convention on the Law of the Sea. The meeting encouraged parties, other Governments and competent intergovernmental organizations to cooperate, collectively or on a regional or subregional basis, to identify and adopt appropriate measures for conservation and sustainable use in relation to ecologically or biologically significant areas, including by establishing representative networks of marine protected areas in accordance with international law, including the United Nations Convention on the Law of the Sea, and based on the best scientific information available, and to inform the relevant processes within the General Assembly. The meeting also requested the Executive Secretary of the Convention on Biological Diversity to facilitate availability and inter-operability of the best available marine and coastal biodiversity data sets and information across global, regional and national scales. The Executive Secretary was requested to organize a series of regional workshops to facilitate the description of ecologically or biologically significant marine areas through application of the scientific criteria as well as other relevant compatible and complementary nationally and intergovernmentally agreed scientific criteria, as well as the scientific guidance on the identification of marine areas beyond national jurisdiction.

163. The Conference of the Parties also requested the Executive Secretary, in collaboration with parties and other Governments, FAO, the Division, IOC and others to establish a repository for scientific and technical information and experience related to the application of the scientific criteria on the identification of ecologically or biologically significant areas, and to develop an information-sharing mechanism with similar initiatives, such as the FAO work on vulnerable marine ecosystems. The Subsidiary Body on Scientific, Technical and Technological Advice was requested to prepare reports based on scientific and technical evaluation of information from the regional workshops, setting out details of areas meeting the scientific criteria, for consideration by the Conference of the Parties, which would then submit relevant information to the General Assembly, in particular the Working Group.231

164. The IOC secretariat noted that the Global Open Oceans and Deep Seabed Biogeographic Classification, together with the Convention on Biological Diversity criteria on ecologically or biologically significant areas, provided important scientific guidance for the identification of marine areas in need of protection. The IOC secretariat also reported that it was participating in the Global Ocean Biodiversity Initiative, an international partnership advancing the scientific basis for conserving biological diversity in the deep seas and open oceans with the aim of helping countries, as well as regional and global organizations, to use existing data and develop new data, tools and methodologies to identify ecologically or biologically significant areas, with an initial focus on areas beyond national jurisdiction. The Global Ocean Biodiversity Initiative has published reports, brochures and briefings providing a general overview of scientific tools, technologies and data sources that can inform the application of the Convention on Biological Diversity criteria.

165. In the context of shipping, the IMO secretariat drew attention to the particularly sensitive sea area concept and special areas, or emission control areas, under MARPOL 73/78, which contain strategic assessment processes in relation to an area. For example, in order to be designated as a particularly sensitive sea area, the area must have certain significant attributes (ecological, socio-economic or scientific), be vulnerable to damage by international shipping activities and have at least one associated protective measure with an identified legal basis that can be adopted by IMO to prevent, reduce or eliminate risks from these activities. Similarly, for an area to be designated as a special area, specific criteria relating to its oceanographical and ecological condition and to sea traffic must be satisfied.232

(b) Marine protected areas

166. At its 2010 meeting, the Working Group recommended that the General Assembly recognize the work of competent international organizations related to the use of area-based management tools and the importance of establishing marine protected areas consistent with international law and based on scientific information, including representative networks by 2012, as called for in the Plan of Implementation of the World Summit on Sustainable Development (A/65/68, para. 17). The General Assembly subsequently endorsed this recommendation.233 It also reaffirmed the need for States to continue and intensify their efforts, directly

229 Resolution 65/37 A, para. 162.
230 See ninth meeting of the Conference of the Parties, decision IX/20 on marine and coastal biodiversity, annex I.
231 Tenth meeting of the Conference of the Parties, decision X/29 on marine and coastal biodiversity.
232 Contribution of IMO.
233 Resolution 65/37 A, para. 162.
and through competent international organizations, to develop and facilitate the use of
diverse approaches and tools for conserving and managing vulnerable marine
ecosystems, including the possible establishment of marine protected areas,
consistent with international law, as reflected in the Convention, and based on the
best scientific information available, and the development of representative
networks of any such areas by 2012 (resolution 65/37 A, para. 177).

167. Available information shows that there has been a significant increase in
coverage of protected areas over the past decade. However, many ecological
regions, particularly in marine ecosystems, remain underprotected, and the
management effectiveness of protected areas remains variable. Of 232 marine
ero-regions, 18 per cent meet the target for protected area coverage of at least
10 per cent, while half have less than 1 per cent protection.234 The total number of
marine protected areas now stands at approximately 5,880, covering over
4.7 million square kilometres, or 1.31 per cent of the world’s ocean area. The total
global marine protected area coverage is largely composed of a relatively small
number of very large marine protected areas, almost all of which are within national
jurisdiction.235

168. A recent report highlighted some of the costs and benefits of marine protected
areas. While the costs of implementation, maintenance and adaptive management
can be high, data on the costs of creation and management of marine protected areas
and area networks remains limited. In 2002 estimates of the annual cost of running
individual areas ranged from $9,000 to $6 million. In 2004 estimates put at
$5 billion to $19 billion the cost of a global network that met 20 to 30 per cent of
protection goals. Costs to livelihoods and impacts on users through loss of access
and/or income were also mentioned. Among the benefits, the report outlined benefits
for fisheries, tourism, spiritual, cultural, historical and aesthetic values, disaster
mitigation, research, education and stewardship for ocean awareness and protection.
Marine protected areas and area networks, as part of broader coastal and ocean
management frameworks, are considered a key tool to help ecosystems remain
healthy and perform ecological functions by protecting critical habitats. However,
for marine protected areas to achieve their objectives, they need to be designed and
managed effectively, taking into consideration the socio-economic needs of
stakeholders. They also need to be part of an effective broader framework that
addresses management across all sectors, and to act in synergy with other tools.236

169. In its contribution, Jamaica stated that it would like to see the creation of
marine protected areas following the results of environmental impact assessment
processes (see sect. I.I.2 above) related to fish stocks beyond its national
jurisdiction.

170. At its tenth meeting, the Conference of the Parties to the Convention on
Biological Diversity adopted a new strategic plan to achieve a significant reduction
of biodiversity loss by 2020. Several of the 20 targets of the plan are relevant to
marine biodiversity, including in areas beyond national jurisdiction. In particular, it
was agreed that, by 2020, at least 10 per cent of coastal and marine areas, especially
areas of particular importance for biodiversity and ecosystem services, would be
conserved through effectively and equitably managed, ecologically representative
and well-connected systems of protected areas and other effective area-based
conservation measures, and integrated into the wider seascapes.237 Decision X/31
on protected areas, also adopted by the Conference of the Parties at its tenth
meeting, encourages parties to establish marine protected areas for conservation
and management of biodiversity as the main objective and, when in accordance with
management objectives of protected areas, as fisheries management tools.

171. The Conference of the Parties noted with concern the slow progress towards
achieving the 2012 target of establishment of marine protected areas, consistent with
international law and based on the best scientific information available, including
representative networks. The meeting invited the parties to make further efforts to
improve the coverage, representativity and other network properties of the global
system of marine and coastal protected areas, in particular identifying ways to
accelerate progress in establishing ecologically representative and effectively
managed marine and coastal protected areas under national jurisdiction or in areas
subject to international regimes competent for the adoption of such measures. The
Conference of the Parties also reiterated the key role of the Convention on
Biological Diversity in supporting the work of the General Assembly with regard to
marine protected areas beyond national jurisdiction, by focusing on providing
scientific and, as appropriate, technical information and advice relating to marine
biological diversity, the application of the ecosystem approach and the
precautionary approach.238

172. The IOC secretariat, in its contribution, stated that a network of marine
protected areas beyond areas of national jurisdiction or any other management
action in such areas would require a monitoring system and a strong evidence base
for policy-setting. Frequent and reliable observations are essential, as oceanographic
features are dynamic. In that regard, fixed-boundary marine protected areas would
not give the protection necessary to preserve pelagic biodiversity, and a solution
being explored by IOC was therefore the use of dynamic marine protected area
boundaries, following the example of electronic nautical charts. It also noted that
the enforcement of marine protected areas beyond areas of national jurisdiction
depended on the availability of vessel-tracking systems and remote sensing tools.
IOC, with the Marine Board of the European Science Foundation, has established a
working group to provide a framework to inform, engage and empower stakeholders
in future marine protected area planning. The working group is reviewing and
synthesizing the factors that should be considered for placing and establishing
marine protected areas; reviewing criteria for the assessment of established areas;
and developing a checklist of criteria for evaluating the efficacy and performance of
an area. The working group is expected to deliver a peer-reviewed paper addressing
these issues by the end of 2012.239

173. At the regional level, members of the Commission for the Conservation of
Antarctic Marine Living Resources, individually and collectively, have made
progress since 2009 with the further development of procedures for bio-regional
planning in the Southern Ocean supporting the development of a representative

234 See note 5 above.
235 See www.iucn.org/about/work/programmes/marine/marine_our_work/marine_mpas/
mpa_publications.cfm?7040/global-ocean-protection.
236 Ibid. See also note 12 above.
237 Decision X/2 on the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity
Targets.
238 Decision X/29 on marine and coastal biological diversity.
239 Contribution of IOC.
system of marine protected areas, including in areas beyond national jurisdiction. In 2009, the Commission adopted a 94,000-square kilometre marine protected area on the South Orkney Islands southern shelf, in the first step towards the establishment of a representative system of marine protected areas within the Convention area by 2012. Activities towards this objective include the collation of data to characterize biodiversity patterns and ecosystem processes, physical environmental features and human activities for 11 priority regions and the convening of a workshop in 2011 to consider different approaches to the selection of candidate sites for further consideration by the Scientific Committee.240

174. In September 2010 and with effect from 12 April 2011, the parties to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) agreed to designate six high-seas marine protected areas: Milne Seamount Complex; Charlie Gibbs South; Altair Seamount High Seas; Antialtair Seamount High Seas; Josephine Seamount High Seas; and Mid-Atlantic Ridge North of the Azores High Seas.241 When combined with the network of sites within national jurisdiction, these marine protected areas provide coverage of 3.1 per cent of the total OSPAR Convention area.242 Some of those marine protected areas overlie the outer continental shelf of a coastal State. While the Charlie Gibbs South and Milne Seamount Complex areas aim at protecting and conserving the biodiversity and ecosystems of the seabed and superjacent waters, the other four areas were established to protect and conserve the biodiversity and ecosystems of the water superjacent to the sites, in coordination with, and complementary to, protective measures taken by Portugal for the seabed.243 The recommendations on management accompanying the establishment of the marine protected areas address awareness-raising; information building; marine science, including the application of the Code of Conduct for Responsible Marine Research in the Deep Seas and High Seas of the OSPAR Maritime Area;244 new developments, including the need for environmental impact assessments and strategic environmental assessments; and engagement with third parties. The decisions and recommendations recognize the need for a range of human activities, such as fisheries, shipping and exploration and exploitation of mineral resources, occurring, or potentially occurring, in the marine protected areas are regulated in the respective frameworks of other competent authorities.245

175. In the context of the Barcelona Convention, the Regional Activity Centre for Specially Protected Areas is implementing a project supporting the establishment of specially protected areas of Mediterranean importance in open sea areas, including the deep sea, considering that the concerned areas are partly or wholly on the high seas.246 Using a biogeographic approach, a list of 12 priority conservation areas lying in the open seas, including the deep sea, likely to contain sites that could be candidates for the list of specially protected areas was prepared.247 A meeting of legal and technical experts was held in March 2011 to review a proposed legal and institutional approach towards the establishment of specially protected areas in the high seas.

176. In November 2010, the Meeting of Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area adopted resolution 4.15 on marine protected areas of importance for cetaceans conservation. It was recalled that parties should cooperate to create and maintain a network of specially protected areas to conserve cetaceans. The States concerned were urged to implement the development of high seas specially protected areas as part of a regional network, working in conjunction with the Regional Activity Centre. The Meeting of the Parties renewed its recommendation that parties give full consideration to and cooperate in the creation of marine protected areas for cetaceans in zones of special importance, within the framework of the relevant organizations, while inviting non-parties to take a similar action. In its resolution on guidelines to address the impact of anthropogenic noise on cetaceans in the Agreement area (see para. 112 above), the Meeting encouraged parties to integrate the issue of anthropogenic noise in management plans for marine protected areas.248

(c) Area-based management of the impacts of fishing

177. The General Assembly, in paragraph 123 of resolution 65/38, encouraged accelerated progress to establish criteria on the objectives and management of marine protected areas for fisheries purposes and, in that regard, welcomed the proposed work of FAO to develop technical guidelines, in accordance with the United Nations Convention on the Law of the Sea and the Code of Conduct for Responsible Fisheries, on the design, implementation and testing of marine protected areas for such purposes. It urged coordination and cooperation among all relevant international organizations and bodies in that regard.

178. The FAO secretariat reported that fisheries practices are often carried out in and around protected areas, and the fisheries sector often utilizes protected areas as management tools. It stated the importance of applying the right knowledge and practices in the management plans of protected areas, including enforcement, community participation, monitoring and the provision of alternative protein, where needed, so as to ensure the sustainable use of living and non-living resources. At its meeting in February 2011, the Committee on Fisheries considered specific activities and networks of areas, and carrying out impact assessments.

179. A number of regional fisheries management organizations have adopted area closures and other area-based measures to address the impacts of fishing. The International Commission for the Conservation of Atlantic Tunas adopted several time/area closures, mainly to protect juveniles of tuna species such as bluefin, swordfish and bigeye.249 In 2010, 11 areas of higher sponge and coral concentrations were closed for two years in the NAFO area. The seamount closures were reviewed by NAFO in 2010 and will remain in effect until 31 December

240 Contribution of the Commission for the Conservation of Antarctic Marine Living Resources.
241 Decisions 2010/1 to 2010/6 and recommendations 2010/12 to 2010/17 of the Contracting Parties to the OSPAR Convention.
242 Contribution of UNEP.
243 Ibid.
244 Agreement 2008-1.
245 Contribution of UNEP.
246 Report of the Extraordinary Meeting of the Focal Points for SPAs, UNEP document UNEP(DEPI)/MED.WG.348/5.
247 Resolution 4.17.
248 See note 55 above.
249 Contribution of the International Commission for the Conservation of Atlantic Tunas.
scheme composed of core areas devoted to conservation and research and monitoring; buffer zones devoted to research and monitoring; and transition areas devoted to human activities such as extractive activities and ecotourism. The identification and selection of these areas is based on the best available scientific information, the application of marine spatial planning and multi-stakeholder participatory processes, including the identification of, and responses to, capacity-building needs.

183. **Marine spatial planning.** Marine spatial planning is emerging as one of the most promising tools to implement ecosystem approaches. It does so by addressing at the same time multiple human uses, their cumulative impacts and interactive effects. 253 It is considered to be a process that can reduce conflicts among uses, facilitate compatible uses and preserve critical ecosystem services to meet economic, environmental, security and social objectives. 254

184. Marine spatial planning, which has the same core principles as marine protected areas, helps to incorporate protected area networks and other conservation objectives within a broader spatial context. 255 The boundaries, total size of the planned area and size of planning units are key elements for the achievement of effective marine spatial planning. Marine spatial planning also needs to consider multiple management objectives and incorporate risk and environmental impact assessments. 256

185. UNESCO has outlined 10 steps for marine spatial planning: defining need and establishing authority; obtaining financial support; organizing the process (pre-planning); organizing stakeholder participation; defining and analysing existing conditions; defining and analysing future conditions; developing and approving the spatial management plan; implementing and enforcing the spatial management plan; monitoring and evaluating performance; and adapting the marine spatial management process. Through its marine spatial planning initiative, UNESCO is synthesizing the information and lessons learned and providing guidance to managers. The purpose of this initiative is to help countries to operationalize ecosystem-based management. 257

186. The integrated coastal area management initiative of IOC envisages marine spatial planning as one of its main outcomes. The IOC approach to marine spatial planning has focused on developing a step-by-step approach for implementation; documenting marine spatial planning initiatives around the world; analysing good practices; collecting references and literature; increasing understanding through publications; and capacity-building and training. 258

**K. Governance**

187. The United Nations Convention on the Law of the Sea is recognized as the legal framework for all activities in the oceans and seas, including the conservation

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250 For more information on particularly sensitive sea areas and special areas, see previous reports of the Secretary-General and www.imo.org/OurWork/Environment/PollutionPrevention/PSSAs/ SpecialAreas/UnderMARPOL/Pages/Default.aspx and www.imo.org/OurWork/Environment/PollutionPrevention/ SpecialAreasUnderMARPOL/Pages/Default.aspx.

251 Contribution of NAFO.

252 See note 9 above.
and sustainable use of marine biodiversity beyond areas of national jurisdiction. Numerous regional and international efforts are under way in various sectors to improve governance and enhance implementation of existing instruments for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction.²⁵⁹

188. One measure of the state of ocean-related governance is found in the number of parties to the international treaties dealing with the marine environment, including the Convention, the Part XI Agreement and the United Nations Fish Stocks Agreement. The General Assembly has frequently called upon States to become parties to the international instruments dealing with governance of the oceans and seas.²⁶⁰ As of 1 March 2010, there were 161 parties to the Convention, 140 to the Part XI Agreement and 78 to the United Nations Fish Stocks Agreement. UNEP has reported that the number of parties to 14 of the major multilateral environmental agreements, some of which are relevant to the marine environment, has continued to increase.²⁶¹

189. Another measure of governance is the level of implementation of existing instruments. At the 2010 meeting of the Working Group, it was generally recognized that gaps in the implementation of the international legal and policy framework remained, in spite of some progress achieved in recent years (A/65/68, para. 42). Areas requiring particular attention were highlighted (para. 43). Divergent views continue to be held on whether an implementing agreement to UNCLOS is necessary to address implementation gaps (para. 45). Divergent views are also held regarding possible gaps in the institutional framework (para. 44).

190. As highlighted in discussions at the meeting of the Working Group, sectors still play a key role in oceans governance (A/65/68, para. 46). However, increased cross-sectoral cooperation and coordination (see sect. III.II below) would assist in improving governance for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction and developing integrated responses and management approaches.

191. In its contribution, the secretariat of the International Seabed Authority expressed the view that there was no institution with an overall mandate for the governance of the ocean space and that, consequently, the only way to ensure an integrated approach, and comprehensive protection of the marine environment, was close cooperation and coordination between international organizations with mandates over activities in the oceans.

192. Current UNEP activities relevant to governance in areas beyond national jurisdiction include ecosystem assessment and valuation, tools and resources for ecosystem-based management, capacity-building and awareness-raising. Planned activities include scientific advice and synthesis of good practices related to policy and governance, and working closely, under the auspices of UN-Oceans, with the Division, FAO, IOC and others to support policy-setting dialogue.²⁶²

193. In collaboration with IUCN, the UNEP Mediterranean Action Plan has initiated a project to promote governance in the Mediterranean Sea. Workshops have been organized to, inter alia, inventory governance issues of the Mediterranean and search for adequate mechanisms to address current challenges in order to provide support to national and intergovernmental decisions and policies in the Mediterranean.²⁶³

194. UNDP reported that a governance workshop, with the aim of generating policy recommendations for the improved governance of marine resources beyond areas of national jurisdiction in the Southern Indian Ocean, will be held by mid-2011. The workshop will be informed by technical papers on anthropogenic threats in the region and legal gap analysis.²⁶⁴

195. With regard to fisheries, addressing the increasing trend in the percentage of overexploited, depleted or recovering stocks will require improved fisheries governance and enhanced cooperation between existing and developing regional fisheries bodies. In this regard, the role of regional fisheries management organizations and arrangements in international fisheries governance is growing steadily, but strengthening their performance remains a major challenge.²⁶⁵

Following the adoption of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, the ground has been laid for the adoption of a new instrument on flag State performance. Furthermore, FAO has begun preparatory work for the establishment of a global record of fishing vessels as a tool against illegal, unreported and unregulated fishing.²⁶⁶

196. Despite the existence of a number of international conventions, the problem of plastic and other marine debris in the oceans persists (see sect. II.I.1 above).²⁶⁷ This points to a gap in the implementation and enforcement of existing regulations and standards. A number of countries have taken steps to address this problem with the adoption of national legislation and regulations. Publicity resulting from media reports and from the activities of several non-governmental organizations has helped to raise public and political awareness of the problem, together with the larger issue of marine litter.²⁶⁸

L. Capacity-building and transfer of technology

197. The General Assembly continues to acknowledge the importance of capacity-building and transfer of technology to assist developing States, in particular the least developed countries and small island developing States, as well as coastal African States, in the protection of the marine environment and the conservation and sustainable use of marine resources (resolution 65/37 A, para. 23).

198. At its 2010 meeting, the Working Group recommended that capacity-building and the transfer of technology, including South-South technical cooperation, should be promoted, facilitated and strengthened (A/65/68, para. 7). In that regard, it

²⁵⁹ Contribution of UNDP.
²⁶⁰ For example, see resolution 65/37 A, paras. 3, 4, 72, 77, 80, 98, 105, 115, 131, 133, 140 and 158, and resolution 65/38, paras. 5, 20, 36, 50, 91 and 92.
²⁶¹ See note 151 above.
²⁶² Contribution of UNEP. Also see A/64/66/Add.2, paras. 150-171.
²⁶³ Contribution of UNEP.
²⁶⁴ Contribution of UNDP.
²⁶⁵ See note 151 above.
²⁶⁶ Ibid.
²⁶⁷ Contribution of FAO.
²⁶⁸ Contribution of UNEP.
recommended that States and competent organizations cooperate in developing programmes and workshops for the sharing of skills relating to scientific and technical aspects of the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, as well as training opportunities (para. 8). It further recommended that relevant organizations collect and disseminate information on available capacity-building opportunities and on the needs expressed by developing countries, and consider how cooperation and coordination could be enhanced in this area (para. 9). The General Assembly subsequently endorsed these recommendations.\(^{269}\)

199. An important consideration raised in the discussion was the need to match available assistance with capacity needs (A/65/68, para. 41). In that regard, the General Assembly has noted with satisfaction the efforts of the Division to compile information on capacity-building initiatives (resolution 65/37 A, para. 26).

200. In the contributions to the present report, the following needs were also mentioned: information assistance for developing countries, especially African countries, in the consideration of the relevant legal regime on marine genetic resources in areas beyond national jurisdiction;\(^{270}\) support in developing capacity to assess and monitor the impact of environmental activities in areas beyond national jurisdiction;\(^{271}\) and assistance in improving technical knowledge in the areas of remote collection systems in deep oceans, instrument calibration and development of databases.\(^{272}\)

201. The GEF National Capacity Self-Assessments also provide information on capacity-building needs expressed by States. Out of 119 participating States, more than 100 identified biodiversity conservation as a priority environmental concern, while 32 highlighted integrated ecosystem management. More than 95 countries specified the following cross-cutting capacities as a priority: (a) capacity to incorporate convention obligations into national legislation, policy and institutions; (b) capacity to develop economic instruments and sustainable financing mechanisms; (c) strengthening of institutional/organizational mandates, structures and frameworks; (d) development and enforcement of policy, legal and regulatory frameworks; (e) information collection, management and exchange; and (f) public awareness-raising and environmental education.\(^{273}\)

202. Examples of recent initiatives for capacity-building and technology transfer are outlined below.

203. The International Seabed Authority continues to promote and encourage the conduct of marine scientific research in the Area, including research for biodiversity-inclusive environmental impact assessments of offshore projects through the Technical Assistance Programme-Marine Scientific Research and other projects.\(^{274}\) To date, a total of $254,312 has been disbursed by the Endowment Fund through six awards for activities that promote capacity-building. In particular, the awards are encouraged to be used for international cruise participation and international laboratory use.\(^{275}\)

204. The need for increased efforts in building capacity of developing countries to implement marine spatial planning as a tool for ecosystem-based management was noted by the IOC/UNESCO secretariat.

205. The secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora has undertaken capacity-building activities to strengthen the ability of parties to the Convention to make non-detriment findings (see para. 135 above). Notification to the Parties No. 2011/004 of 6 January 2011 seeks input from parties on draft guidance material for the making of non-detriment findings and the organization of related workshops.\(^{276}\) The secretariat of the Convention also continues to provide assistance to parties, including scientific, technical and legal advice, electronic training materials and courses, CD-ROMs, country missions and national and regional workshops.\(^{277}\)

206. With a view to enabling coastal States to establish hydrographic capabilities and thereby support better safety at sea and environmental protection, IHO stated in its contribution that it was ready to provide assistance, in particular to developing States and small island States.

207. At the regional level, NAFO has recently published coral and sponge guides that will aid in the identification of species that are commonly found in fishing trawls. These guides are practical keys for use by fishers, technicians and other non-experts at sea for identifying corals and sponges.\(^{278}\)

208. Prompted by recommendations arising from a 2008 review of the performance of the Commission for the Conservation of Antarctic Marine Living Resources, its Scientific Committee has developed a three-year programme to support capacity-building. The secretariat of the Commission also supports training and capacity-building initiatives in respect of monitoring, control and surveillance, with a focus on combating illegal, unreported and unregulated fishing.\(^{279}\)

209. The last meeting of the Inter-American Tropical Tuna Commission agreed to create a special fund to promote capacity-building. The Antigua Convention requires the Commission to adopt measures relating to technical assistance, technology transfer, training and other forms of cooperation to assist developing countries that are members of the Commission to fulfil their obligations, as well as to enhance their ability, inter alia, to participate in high seas fisheries on a sustainable basis.\(^{280}\)

210. The Division administers two fellowships, that provide capacity-building support in developing States, namely the Shirley Amerasinghe Fellowship and the United Nations-Nippon Foundation of Japan Fellowship Programme.\(^{281}\) These fellowships offer customized research programmes in the field of ocean

\(^{269}\) Resolution 65/37 A, para. 162.

\(^{270}\) Contribution of the Economic Commission for Africa.

\(^{271}\) Contribution of Namibia.

\(^{272}\) Contribution of Brazil.

\(^{273}\) UNDP, "National Capacity Self-Assessments: Results and Lessons Learned for Global Environmental Sustainability" (2010).

\(^{274}\) See ISBA/16/A/2, paras. 31-44.


\(^{276}\) The notification is available at www.cites.org.


\(^{278}\) The guides are available at www.nafo.int.

\(^{279}\) Contribution of the Commission for the Conservation of Antarctic Marine Living Resources.

\(^{280}\) Contribution of the Inter-American Tropical Tuna Commission.

affairs and the law of the sea and related disciplines, including marine science in support of management frameworks.

III. Possible options and approaches to promote international cooperation and coordination

211. The conservation and sustainable use of marine biodiversity, including beyond areas of national jurisdiction, is a cross-cutting issue regulated and managed by numerous, and often overlapping, legal frameworks, organizations, and bodies, at the national, regional and global levels. Cooperation among these organizations and bodies, at all levels, as well as across sectors and regimes with varying competencies beyond areas of national jurisdiction, is at the basis of a coordinated approach to the management of activities aimed at the conservation and sustainable use of such biodiversity. At the 2010 meeting of the Working Group, several delegations underlined the need for international cooperation in assessing and controlling anthropogenic impacts on marine biodiversity beyond areas of national jurisdiction, including through technical and financial support (A/65/68, para. 51).

212. A number of options and approaches to improve cooperation and coordination with respect to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction have been discussed in various international forums, and several studies have been developed on these issues. The present section outlines initiatives, options and approaches to facilitate and promote international cooperation and coordination.

A. Information base

213. Better understanding and quantitative measurement of biodiversity and ecosystems values to support international policy assessments are essential to improved governance.282 A wealth of information and scientific data is being gathered through various research projects (see sect. II.A.1 above). Documenting and sharing lessons learned and facilitating information exchange on biodiversity, its uses and management measures is critical to furthering our understanding and capacity to inform decision-making and improved management. Capacity development initiatives and the development of standardized databases would support this purpose.

214. At the 2010 meeting of the Working Group, various measures were proposed to improve cooperation and coordination to strengthen the information base. In this regard, a view was expressed that the Regular Process, when operational, would provide an integrated knowledge base to be used by sectoral bodies in planning and management (A/65/68, para. 49). The Regular Process would help to address the current fragmented information from different and unevenly distributed assessments and to enhance informed decision-making (para. 36).

215. At the international and regional level, States and organizations are taking steps to create and strengthen the information base.

216. Of particular note is the Census of Marine Life (see paras. 18 and 19 above), which included more than 2,600 scientists from more than 80 States, specializing in diverse geographic environments or subject areas such as oceanography, ecology, statistics and marine biology.283 The Census of Marine Life prompted the establishment of various databases on topics such as the biodiversity of seamounts,284 the diversity of abyssal marine life285 and the biogeography, ecology and vulnerability of chemosynthetic ecosystems in the deep sea.286 Globally, the development of databases and other repositories of data is increasing.

217. The intergovernmental science policy platform on biodiversity and ecosystem services, currently under development, is expected to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, including marine biodiversity, by performing regular and timely assessments, providing key scientific information to policymakers and catalyzing financing for capacity-building activities.287

218. With regard to fishery resources, the Fishery Resources Monitoring Systems Partnership continued to enrich its database with contribution made by regional fisheries bodies.288

219. At the regional level, the OSPAR Commission has fostered international cooperation and dissemination of information and expertise to support capacity-building and exchange of best practices, including through collaboration with other competent authorities.289

220. The North-East Atlantic Fisheries Commission has sought cooperation with other international governmental organizations with competence to regulate human activities in the oceans other than fisheries; a memorandum of understanding with the OSPAR Commission was signed in 2008. The memorandum of understanding has facilitated free flow of information between the two Commissions, spatial planning and cooperation to enhance knowledge and understanding of the abundance and distribution of fish and other marine species. An agreement of cooperation was also signed in 2009 with IMO. The Commission is seeking similar arrangements with the International Seabed Authority. Furthermore, as chair of the regional fishery bodies secretariat network, the Commission aims to make the network the efficient vehicle for exchanging information and experiences between regional fishery bodies globally.290

221. Members of the Commission for the Conservation of Antarctic Marine Living Resources, collectively and individually, share information relating to Antarctic marine ecosystems through a variety of means, such as the Census of Antarctic Marine Life, the Southern Ocean Observing System and the Marine Biodiversity Information Network of the Scientific Committee for Antarctic Research. Several

282 See note 12 above.

283 See www.comlmaps.org. See also A/62/169, para. 101.

284 See the “Global Census of Marine Life on Seamounts” project at http://census.niwa.co.nz/.

285 See the “Census of the Diversity of Abyssal Marine Life” project at www.cedmar.org/.


287 See “Intergovernmental science-policy platform on biodiversity and ecosystem services: report of the Executive Director”, UNEP document UNEP/VC.26/6. See also http://ipbes.net/.

288 Contribution of FAO.

289 Contribution of UNEP.

290 Contribution of the North-East Atlantic Fisheries Commission.
non-governmental organizations also take an active interest in collecting and disseminating information relating to ecological processes in the Antarctic.

B. Capacity-building and technology transfer

222. At the eleventh meeting of the Informal Consultative Process, the focus of which was capacity-building, including in marine science, it was observed that despite efforts in building the capacity of developing States in ocean affairs and the law of the sea, such capacity had not improved substantially. The general view was expressed that one of the overarching challenges was the lack of coordination among capacity-building providers, which could counteract the effects of capacity-building programmes. In that regard, delegations stressed the need to coordinate capacity-building, in particular within the United Nations system, in order to ensure a targeted approach and prevent fragmentation or duplication of efforts (A/65/169, paras. 51 and 52).

223. The specific need to increase capacity-building and technology transfer for developing countries, including small island developing States, has been highlighted by the Working Group. Among others, it identified the promotion of South-South technical cooperation as an option to be further promoted for capacity-building and transfer of technology (A/65/68, para. 7). It is also important to match the needs of developing States with the available assistance, while ensuring that programmes are systematically reviewed.

224. The information outlined in this report and in previous reports of the Secretary-General shows that a number of cooperative programmes, including training activities, are ongoing to facilitate and develop the capacity of developing countries. States are increasingly invited to identify specific needs for the purpose of matching them with capacity-building initiatives and, as necessary and appropriate, tailoring existing programmes to those needs.

225. The General Assembly, at its sixty-fifth session, recognized with appreciation the funding set aside by GEF for projects relating to oceans and marine biodiversity.

226. Some organizations have coordinated capacity-building with other organizations as well as exchanging information on best practices. In order to strengthen relevant institutions, including regional fisheries management organizations and arrangements, for good fisheries governance, FAO has identified well-trained staff, adequate financial resources and assistance and capacity-building as areas of focus. Special attention should also be dedicated to increasing the capacity of all stakeholders to fulfil their management responsibilities.

227. International cooperation and dissemination of information and expertise to support capacity-building and exchange of best practices, including through collaboration with other competent authorities, such as the North-East Atlantic Fisheries Commission, IMO, the International Seabed Authority and the International Atomic Energy Agency, was promoted in the context of the OSPAR Convention.

C. Implementation

228. The need to improve the implementation of existing instruments and modern management approaches relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction has been emphasized in numerous forums and in previous reports of the Secretary-General. In this regard, the General Assembly has reiterated the essential need for cooperation, including through capacity-building and transfer of marine technology, to ensure that all States are able to implement the United Nations Convention on the Law of the Sea and benefit from the sustainable development of the oceans and seas, as well as participate fully in global and regional forums and processes dealing with oceans and law of the sea issues. It has also emphasized the importance of State participation in existing instruments and increased efforts in the effective implementation of such instruments, including through effective flag State control, port State control, market-related measures and monitoring, control and surveillance, as well as modern approaches, such as the precautionary and ecosystem approaches.

229. In 2010, the Working Group recommended that States apply relevant approaches for the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, effectively implement relevant global and regional instruments to which they are parties, and consider becoming party to relevant instruments to which they are not yet party (A/65/68, para. 11). It also recommended that States and competent international organizations facilitate and enhance cooperation and coordination, including through participation in regional seas conventions and regional fisheries management organizations and arrangements, the exchange of information on best practices and the establishment of joint or coordinated programmes of work and activities (A/65/68, para. 12). These recommendations were endorsed by the General Assembly.

230. In the context of fisheries, the resumed Review Conference on the United Nations Fish Stocks Agreement held in 2010 proposed additional means of strengthening the substance and methods of implementation of the provisions of the Agreement in order to better address any continuing problems in the conservation and management of straddling and highly migratory fish stocks. The Conference emphasized that full implementation of, and compliance with, conservation and management measures that were adopted in accordance with international law and applied the precautionary approach and were based on the best available scientific evidence, was essential to ensure recovery and long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks. The
General Assembly encouraged States and regional and subregional fisheries management organizations and arrangements to consider implementing the recommendations of the resumed Review Conference.\textsuperscript{301}

231. A number of activities to enhance international cooperation and coordination, and thereby improve implementation in relation to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, have been detailed in the current report.\textsuperscript{302} The General Assembly has noted with appreciation the efforts at the regional level to further the implementation of the Convention and respond, including through capacity-building, to issues related, inter alia, to the conservation and sustainable use of living marine resources, the protection and preservation of the marine environment and the conservation and sustainable use of marine biodiversity.\textsuperscript{303}

232. It is clear, however, that further efforts are necessary. One of the challenges faced by the secretariat of the International Seabed Authority consists of implementing and keeping under review the rules, regulations and procedures of the Authority to manage risks to biodiversity (see sect. II.G above).\textsuperscript{304}

233. The UNESCO secretariat pointed out that existing principles, best available scientific information and some of the experiences for the management of areas within national jurisdiction, both in the marine as well as terrestrial environment, can offer approaches and operational tools to implement coordinated actions beyond areas of national jurisdiction.\textsuperscript{305}

234. In the context of fisheries, challenges to improved implementation of responsible fisheries include financial and human resource constraints and inadequacies in institutional and legal frameworks. Other common difficulties include high levels of biological and ecological uncertainty about the status of resources and the likely consequences of management action; poorly or loosely defined objectives for fisheries management leading to reactive rather than proactive management; frequent absence of effective or appropriate systems of user or access rights; absence of or inadequate participation by fishers and other stakeholders in management; insufficient capacity in national and regional fisheries management authorities; and widespread illegal, unreported and unregulated fishing resulting from inadequate monitoring, control and surveillance systems.\textsuperscript{306}

D. Integrated management and ecosystem approaches

235. As noted in previous reports of the Secretary-General, cooperation and coordination towards integrated approaches and ecosystem approaches is fundamental to respond to the current fragmentation of management regimes.\textsuperscript{307} The General Assembly has consistently reaffirmed the need to improve cooperation and coordination at the national, regional and global levels to support better implementation of the Convention and integrated management of the oceans.\textsuperscript{308}

236. At the 2010 meeting of the Working Group, a number of proposals were made with a view to furthering cooperation and coordination towards the development of integrated management approaches and ecosystem approaches, building on existing mechanisms or developing new ones (A/65/68, paras. 46-50).

237. The secretariat of the International Seabed Authority underlined the need for close cooperation and coordination between international organizations with mandates over various activities in the oceans to ensure an integrated approach and comprehensive protection of the marine environment. In that regard, it drew attention to its close cooperation with other organizations having a mandate over the protection of the marine environment beyond areas of national jurisdiction, including the OSPAR Commission, the International Cable Protection Committee and the secretariat of the Convention on Biological Diversity.\textsuperscript{309}

238. It has also been suggested that a regional marine spatial planning (see paras. 183-186 above) initiative could provide a framework to advance ocean management at a large ecosystem scale, addressing cumulative impacts from multiple uses and promoting integration between ecological, economic and social needs beyond areas of national jurisdiction.\textsuperscript{310}

239. The establishment of a network of managers to exchange information on ecosystem-based management practice was also identified as a way to ensure that ecosystem-based management becomes more effective and easier to implement.\textsuperscript{311}

E. Environmental impact assessments

240. At the 2010 meeting of the Working Group, a view was expressed in support of a need to harmonize requirements for environmental impact assessments in international instruments (A/65/68, para. 51). Several delegations proposed elaborating a global methodology for carrying out environmental impact assessments at the regional level, taking into consideration sectoral activities (A/65/68, para. 55). The adoption of a resolution by the General Assembly on the implementation of environmental impact assessments, incorporating a process similar to the one established in resolution 61/105 on the assessment of bottom fishing activities, was also proposed. Another view was expressed that the approach outlined in resolution 61/105 should not be applied to all activities beyond areas of national jurisdiction regardless of the nature of the activity or sector. The need to permit scientific or exploratory activities that did not cause significant adverse impact was also emphasized (A/65/68, para. 56).

241. The work undertaken in the context of the Convention on Biological Diversity and FAO (see sect. III.12 above), among others, may assist in gaining a better understanding of the various aspects and challenges of environmental impact processes as applied beyond areas of national jurisdiction and ways to address them.

\textsuperscript{301} Resolution 65/38, para. 32.

\textsuperscript{302} See A/65/68, para. 42.

\textsuperscript{303} Resolution 65/37 A, para. 219.

\textsuperscript{304} Contribution of the Authority.

\textsuperscript{305} Contribution of UNESCO.

\textsuperscript{306} “FAO’s role for improved integration of fisheries and aquaculture development and management, biodiversity conservation and environmental protection”, FAO document COFI/2011/7.

\textsuperscript{307} See A/64/66/Add.2, para. 218 and A/65/69/Add.2, para. 223.

\textsuperscript{308} Resolution 65/57 A, preamble.

\textsuperscript{309} Contribution of the Authority.

\textsuperscript{310} See note 9 above.

\textsuperscript{311} See note 188 above.
242. Owing to the limited information available regarding environmental impact assessments beyond areas of national jurisdiction, including on capacity-building needs, the implementation of the mechanism foreseen in articles 206 and 205 of the Convention, and the modalities of such implementation, merit further attention. These mechanisms require States to disseminate reports on the assessment of potential effects of planned activities under their jurisdiction or control which may cause substantial pollution of or significant and harmful changes to the marine environment through the competent international organizations.

243. In addition to information on the results of the assessments, a mechanism could be considered to share, through the competent international organizations, experiences in carrying out such assessments, lessons learned and best practices, including information on capacity-building needs.

244. Other approaches to facilitating an interdisciplinary and cross-sectoral review of the environmental impact assessment reports include the appointment of cross-sectoral advisory boards or scientific committees. 312

F. Area-based management tools

245. One of the key requirements for progress in identifying and managing areas in need of protection is a single corpus of scientific advice. 313 At its meeting in 2010, the Working Group recommended that the General Assembly call upon States to work through competent international organizations towards the development of a common methodology for the identification and selection of marine areas that may benefit from protection based on existing criteria (A/65/68, para. 18). The General Assembly endorsed that recommendation. 314

246. The secretariat of the International Seabed Authority, in its contribution, highlighted the fact that the scientific criteria on the basis of which the proposal related to the environmental management plan in the Clarion-Clipperton Zone was made (see paras. 58 and 154 above) were similar to the Convention on Biological Diversity criteria (see paras. 162 and 163 above) and those set out in the FAO International Guidelines (see para. 41 above), such convergence ensuring a consistent approach. This illustrated the benefits from close cooperation among international organizations with various mandates but similar challenges to address.

247. Other approaches put forward in other contexts to achieve coordination in scientific advice underpinning area-based management include: regional workshops to bring key stakeholders into the identification process at an early stage; commissioning a scientific institution or body to conduct the initial analysis for later review by States at a workshop or other joint meeting; and establishing a joint scientific working group with participants from relevant regional fisheries management organizations and arrangements, regional seas organizations and other experts. 315

248. While progress has been made with enhanced consultation and involvement of stakeholders, it has been suggested that further efforts could be made in sharing best practices and lessons learned on engaging stakeholders. In addition, changes in ecosystems beyond national jurisdiction are likely to impact associated and neighbouring ecosystems directly or indirectly. There is therefore a need to engage neighbouring and adjacent coastal States in order to ensure an ecosystem approach.

249. Cooperative mechanisms have been established between a number of organizations in relation to the establishment and implementation of area-based management tools as shown in this report (see sect. II.J.3 above). For example, in 2010, a memorandum of understanding was concluded between the OSPAR Commission and the International Seabed Authority. Along with the draft memorandum, the OSPAR Commission submitted a request for observer status in the Assembly; both were approved by the Assembly at its session in April 2010. A collective arrangement between competent authorities on the management of marine protected areas beyond areas of national jurisdiction in the OSPAR Convention area is also being developed for consideration by the 2011 meeting of parties to the Convention. 316

250. In the context of the establishment of specially protected areas of Mediterranean importance, the Regional Activity Centre for Specially Protected Areas intends to develop joint activities with the secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area, the General Fisheries Commission for the Mediterranean and IUCN. The group of experts convened in March 2011 under the auspices of the Mediterranean Action Plan (see para. 175 above) included representatives from the Division, FAO, the Regional Marine Pollution Emergency Response Centre for the Mediterranean, the General Fisheries Commission for the Mediterranean, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area, IUCN, non-governmental organizations and civil society. Consultative mechanisms such as those could be further promoted.

251. Agreement on common principles and goals for spatial management, as well as global guidance on implementation would also be beneficial to promote more coherent policies and practices. 317 Pursuing marine spatial planning on a regional scale could provide a framework for cross-sectoral cooperation and management, minimizing conflicts between uses and stakeholder consultation. 318

G. Marine genetic resources

252. Divergent views continue to be held with regard to the relevant legal regime for activities related to marine genetic resources beyond areas of national jurisdiction. 319 The General Assembly continues to note the discussion on the relevant legal regime on marine genetic resources in areas beyond national jurisdiction in accordance with the Convention and to call upon States to further

312 “Modalities for advancing cross-sectoral cooperation in managing marine areas beyond national jurisdiction: draft for discussion”, UNEP document UNEP (DEPI)/RS.12/8.
313 Ibid.
314 Resolution 65/37 A, para. 162.
315 See note 313 above.
316 See note 9 above.
317 See note 313 above.
318 See note 9 above.
319 Ibid.
320 A/63/79, paras. 36 and 37.
consider this issue in the context of the mandate of the Ad Hoc Open-ended Informal Working Group, taking into account the views of States on Parts VII and XI of the Convention, with a view to making further progress on this issue.

253. At the 2010 meeting of the Working Group, several delegations also called for strengthening the role of the Working Group, including with a view to adopting specific provisions to regulate access to marine genetic resources beyond areas of national jurisdiction and exploitation. A proposal was made that the United Nations should urgently initiate a negotiating process with the aim of defining the legal aspects related to marine biodiversity beyond areas of national jurisdiction, including the establishment of an institutional structure responsible for the management and conservation of the resources (A/65/68, para. 74).

254. The Economic Commission for Africa noted that the recommendations of the Working Group would provide developing countries, especially African countries, with needed information for consideration of the relevant legal regime on marine genetic resources in areas beyond national jurisdiction.321

255. The FAO secretariat suggested that the International Treaty on Plant Genetic Resources for Food and Agriculture could serve as a useful reference for a practical and working framework for multilateral benefit sharing within the United Nations system, as witnessed by the more than 90,000 transfers of genetic material in its first seven months of operation.

256. The adoption of the Nagoya Protocol by the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity, in particular its article 10 (see para. 68 above), and its implementation may provide further opportunities to inform and advance the discussions on marine genetic resources, including by providing examples of how the sharing of benefits from the utilization of resources from areas within national jurisdiction may be addressed in a multilateral context.

H. Cross-sectoral cooperation and coordination

257. Enhanced cooperation and coordination between sectors and among States and intergovernmental organizations is essential in efforts to improve the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction. In this regard, actions to address cross-cutting issues, such as marine debris, invasive alien species, climate change and ocean noise (see sect. II.I above), which have multiple sources and cumulative effects, will only be effective if they are based on corresponding cross-sectoral approaches.

258. The importance of increased cross-sectoral cooperation and coordination and the need for modern approaches to oceans governance has been highlighted in many forums, including the General Assembly.322 In this regard, the General Assembly has repeatedly emphasized that the problems of ocean space are closely interrelated and need to be considered as a whole through an integrated, interdisciplinary and intersectoral approach.323 It has also reaffirmed the need to improve cooperation and coordination at all levels, in accordance with the Convention, to support and supplement the efforts of each State in promoting the implementation and observance of the Convention, and the integrated management and sustainable development of the oceans and seas.324

259. Efforts continue at all levels to respond to these calls, as detailed in various sections of the current report. At its twenty-ninth session, the FAO Committee on Fisheries further encouraged the FAO secretariat to improve inter-agency coordination with United Nations entities and to continue efforts to raise the profile of the sector in meetings relating to climate change. FAO has also recently initiated the development of the Global Partnership on Climate, Fisheries and Aquaculture, which is a voluntary partnership of 20 international organizations and sectoral bodies. The partnership was developed to draw together potentially fragmented and duplicating climate change activities through a multiagency global programme of coordinated actions and to address the need to raise the profile of fisheries and aquaculture in global climate change discussions.325

260. There is also a need to enhance the use of partnerships or cooperative mechanisms between intergovernmental organizations, industry organizations and non-governmental organizations to reduce duplication and ensure optimal use of the unique expertise and mandates of each. The drive and momentum for such rationalization must come from member States and donors by ensuring that the organizations that serve them work to maximum efficiency within their mandates and cooperate with partners in areas where those partners have competitive advantages. This could also be facilitated by a stronger role for coordinating institutions, such as UN-Oceans.326

261. At the national level, continued and strengthened efforts to improve capacity for integrated approaches are required and must include attention to building or reinforcing cooperation and communication between agencies responsible for different mandates and sectors. Excessive sectoral and institutional fragmentation and conflicting priorities at the national level will hinder global efforts towards responsible, integrated and sustainable approaches to governance.327

IV. Key issues and questions for which more detailed background studies would facilitate their consideration by States

262. Notwithstanding past and present efforts and initiatives to increase knowledge of marine biodiversity beyond areas of national jurisdiction, significant knowledge and information gaps still exist. At the 2010 meeting of the Working Group, some delegations recalled that the need for further studies should not be used as a reason to delay the development of measures for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction (A/65/68, para. 78).

263. A number of proposals were made for further studies (see, in particular, A/65/68, para. 80).

321 Contribution of the Economic Commission for Africa.

322 See, for example, resolutions 65/37 A and 65/38; A/65/68, paras. 11-13; and note 47 above.

323 See, for example, resolution 65/37 A, preamble.

324 See, for example, resolution 65/37 A, preamble.

325 See note 163 above.

326 See note 307 above.

327 Ibid.
264. The present report also highlights some areas requiring further studies. In particular, the extent to which the following activities occur beyond areas of national jurisdiction, and their impacts in those areas, may require further attention: research for and exploitation of marine genetic resources, carbon sequestration, ocean fertilization, development of renewable energy, laying of submarine cables and pipelines, aquaculture, tourism. The impacts of alien invasive species, marine debris, climate change and ocean noise also merit further attention. In their contributions to the present report, a number of organizations also highlighted areas for further work and studies, which are outlined below.

265. In the field of marine science, the IOC secretariat noted the need for comprehensive scientific observations to advance from a precautionary to a preventive approach in relation to the selection of marine protected areas in open oceans (see sect. II.J.3 above). The need for further comprehensive scientific observations and data from different fields of study, including biology, geography, geology, geomorphology, oceanography and socio-economics, was also emphasized.328

266. In relation to fisheries, the FAO secretariat noted that emphasis should be given to understanding and addressing the technical, ecosystemic, political and legal challenges deriving from the trend of moving aquaculture activities seawards, and increasingly to areas beyond national jurisdiction. The secretariat of the Commission for the Conservation of Antarctic Marine Living Resources noted that the Commission’s Scientific Committee had identified three priority areas for its work over the next three years in the Southern Ocean: feedback management of the krill fishery; assessment of toothfish fisheries, especially in exploratory fisheries; and marine protected areas. Other key research areas identified included vulnerable marine ecosystems and climate change. The secretariat of the North-East Atlantic Fisheries Commission called attention to the need for further study to understand how climate change affects the major fish stocks in the North-East Atlantic.

267. Regarding marine genetic resources, the results of the Census of Marine Life have shed light on research still needed. In particular, the International Census of Marine Microbes drew attention to the need for future research on the temporal dimension of changes in microbial community structures. A number of questions for further research were highlighted, including why some groups dominate marine habitats globally, why there is a division between the community structure of pelagic and benthic habitats, whether the most diverse taxa are also the most numerically abundant, what kinds of taxa are associated with plants and animals and to what extent they are unique to each species (see also para. 19 above). The FAO secretariat, in its contribution, stated that the elaboration of a new legal regime might warrant further study owing to the fact that the United Nations Convention on the Law of the Sea was focused on fisheries.

268. Understanding and addressing the issues which accompany developments related to marine renewable energy requires additional scientific research. Consideration of the possible need for additional regulation at all levels would be beneficial. The 13th meeting of the Informal Consultative Process, which will focus on marine renewable energies,329 will provide an opportunity to discuss these and other issues.

269. On governance, the IOC secretariat stated that work was needed to compile relevant existing legal instruments and define clear governance for the management of areas beyond national jurisdiction, noting that the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity should underpin any initiative.

V. Conclusions

270. The importance of marine biodiversity, including beyond areas of national jurisdiction, for global food security, healthy functioning marine ecosystems, economic prosperity and sustainable livelihoods cannot be overstated. In recognition of this, Governments, gathered at the high-level events of the General Assembly in September 2010, have renewed their commitments to the sustainable management of biodiversity and ecosystems which contribute to achieving food security and hunger and poverty eradication. The present report note the work of various global and regional organizations and entities which have taken encouraging steps towards the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, including through cooperative mechanisms.

271. Yet, the cumulative impacts of human uses and human-induced environmental changes, such as climate change and ocean acidification, continue to take their toll on vital marine ecosystems. Further actions and cross-sectoral cooperative mechanisms are, therefore, necessary to understand and address the impacts of various sectors on marine biodiversity beyond areas of national jurisdiction, taking into account the interconnectivity among marine ecosystems as well as between sea, land and air. Owing to the specificities of areas beyond national jurisdiction in terms of, inter alia, governance, legal regime as well as geographical and ecological conditions, global guidance is necessary on ways to adapt and implement, in a coherent and multidisciplinary manner, management tools commonly used within national jurisdiction. This is particularly needed in regard to environmental impact assessments and area-based management tools. Information sharing on planned or current activities and their potential impacts, as well as on best practices and capacity-building needs, underpins the success of measures taken for the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction. In that regard, making full use of existing mechanisms to facilitate information sharing would be beneficial.

272. Strengthening the capacity of States and various actors and stakeholders to contribute to expanding our knowledge of marine ecosystems, their functioning and resilience is critical, as is the development of capacity to implement relevant international instruments and management tools and approaches, such as environmental impact assessments, ecosystem approaches and marine spatial planning. In addition to improving the capacity to adopt and enforce appropriate preventive and response measures, political will and the capacity to address the underlying causes of marine biodiversity loss are also crucial.

328 Contribution of IOC.

329 General Assembly resolution 65/37 A, para. 231.
273. As highlighted in another context, conserving biodiversity cannot be an afterthought once other objectives are addressed: it is the foundation on which many of these objectives are built. Marine biodiversity beyond areas of national jurisdiction is no exception. Our efforts for the conservation and sustainable use of marine biodiversity must match the scale and magnitude of the challenges that it faces.

274. The General Assembly, through its Working Group, is the only global institution with a multidisciplinary and cross-sectoral perspective and competence on all issues related to marine biodiversity beyond areas of national jurisdiction. It is, therefore, uniquely placed to review progress, identify what additional actions might be required at various levels and galvanize the necessary political commitments. The convening of the Rio+20 Conference in Brazil in 2012 presents a timely opportunity for the General Assembly to provide the policy guidance required to facilitate the consistent and uniform application of the United Nations Convention on the Law of the Sea and other instruments relevant to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction for the benefit of present and future generations.

330 Foreword by the Secretary-General of the United Nations to the third edition of Global Biodiversity Outlook (2010).
Report of the Secretary-General on oceans and the law of the sea, Addendum, A/66/70/Add.1, 11 April 2011
The present report has been prepared pursuant to paragraph 240 of General Assembly resolution 65/37 of 7 December 2010, requesting the Secretary-General to present, for consideration by the Assembly at its sixty-sixth session, a comprehensive report on developments and issues relating to oceans and the law of the sea. The report is aimed at facilitating discussions on the topic of focus at the twelfth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, on the theme entitled “Contributing to the assessment, in the context of the United Nations Conference on Sustainable Development, of progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and addressing new and emerging challenges”. It constitutes the second part of the comprehensive report of the Secretary-General and is also being submitted to States Parties to the United Nations Convention on the Law of the Sea, pursuant to article 319 of the Convention.
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Abbreviations

CARICOM Caribbean Community
FAO Food and Agriculture Organization of the United Nations
GEF Global Environment Facility
IAEA International Atomic Energy Agency
ICSU International Council for Science
IHO International Hydrographic Organization
ILO International Labour Organization
IMO International Maritime Organization
IOC Intergovernmental Oceanographic Commission of UNESCO
MARPOL 73/78 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto
NEPAD New Economic Partnership for Africa’s Development
UNCTAD United Nations Conference on Trade and Development
UNDP United Nations Development Programme
UNESCO United Nations Educational, Scientific and Cultural Organization
UN-Oceans United Nations Oceans and Coastal Areas network
WMO World Meteorological Organization
WIPO World Intellectual Property Organization
WTO World Trade Organization
II. Oceans and seas and sustainable development

1. Pursuant to the request of the General Assembly in its resolution 65/37, the present report, being submitted to the sixty-sixth session of the General Assembly, is intended to contribute to the assessment, in the context of the United Nations Conference on Sustainable Development, of progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and poverty alleviation while promoting social development and ensuring a decent standard of living for all, and strengthening international co-operation in that regard.

2. In paragraph 231 of its resolution 65/37, the General Assembly decided that sustainable development and use of the oceans and their resources are essential to the achievement of the three pillars of sustainable development: economic development, environmental protection, and social development and human well-being. It also called upon States to contribute to the assessment, in the context of the United Nations Conference on Sustainable Development, of progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development.

3. The report benefited from the contributions of intergovernmental organizations and bodies engaged in activities relating to ocean affairs and the law of the sea. The Secretary-General wishes to express his appreciation to the following organizations and bodies for their responses received as at 30 March 2011: the World Commission on Environment and Development noted that sustainable development, if not survival itself, depends on significant advances in the management of the oceans. After recognizing that the advancement of the law of the sea was an urgent necessity, the Commission observed that the most significant initial action that nations can take in the interests of the oceans’ threatened life-support system is to ratify the Law of the Sea Convention.

4. Also relevant to the consideration of the topic of focus are previous reports for meetings of the Informal Consultative Process and past reports of the Secretary-General on oceans and the law of the sea, which provide information on developments related to ocean affairs and law of the sea issues, including the implementation of the United Nations Convention on the Law of the Sea.

5. Section II of the present report explains the relationship between the oceans and seas and sustainable development and describes the relevant provisions of the United Nations Convention on the Law of the Sea and other international instruments.

1. Background

11. Twenty years after the 1972 United Nations Conference on the Human Environment, the United Nations Conference on Environment and Development was convened in Rio de Janeiro, Brazil from 3 to 14 June 1992 to rethink economic development and find ways to halt the destruction of the Earth’s natural resources and ecosystems. Governments recognized the need to refocus international and national strategies and policies to better integrate the three pillars of sustainable development.

12. The “Earth Summit”, as it is commonly referred to, concluded with the adoption of the Rio Declaration and Agenda 21, which defined the global strategy to achieve sustainable development. Agenda 21 remains the most comprehensive and effective programme of action ever launched by the international community to preserve the rights of future generations.

2. Rio Declaration on Environment and Development

13. At the Earth Summit, Governments adopted a declaration with a set of principles to guide sustainable development.6 Those principles build on the Stockholm Declaration adopted at the 1972 United Nations Conference on the Human Environment and recognize that the only way to have long-term economic progress is to link it with environmental and social protection. The Rio Declaration7 emphasizes that people are entitled to a healthy and productive life in harmony with nature (Principle 1), as long as development does not undermine the developmental and environmental needs of present and future generations (Principle 3). States have the right to exploit their own resources and the responsibility to ensure that no environmental damage occurs beyond the limits of national jurisdiction (Principle 2).

14. The need for a precautionary approach to protect the environment was also acknowledged (Principle 15). Where there are threats of serious or irreversible damage, that approach should prevail. Environmental protection and poverty eradication were considered to constitute an integral part of the development process.

15. The role of international cooperation was recalled as important in order to conserve, protect and restore the health and integrity of the Earth’s ecosystem. States were encouraged to share knowledge and innovative technologies to achieve the goal of sustainability and invited to reduce and eliminate unsustainable patterns of production and consumption.

16. The importance of effective environmental laws and the development of national law regarding liability for the victims of pollution and other environmental damage was recognized (Principle 13). Those laws should not be used as an unjustifiable means of restricting international trade and should rely on the polluter-pays principle (Principle 16).

6 A/CONF.151/26 (Vol. I), annex I.

3. Agenda 21 and chapter 17

Agenda 21

17. Agenda 21* sets out a comprehensive programme of action for sustainable development that addresses every area in which human activities may affect sustainable development, including oceans and seas. The Agenda is divided into four main sections: social and economic dimensions, such as combating poverty and changing consumption patterns; conservation and management of resources for development; strengthening the role of major groups; and means of implementation, including scientific and technological means, human resource development, capacity-building, technology transfer, international institutions and financial mechanisms.

Chapter 17

18. Chapter 17 of Agenda 21, entitled “Protection of the Oceans, all Kinds of Seas, Including Enclosed and Semi-enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of their Living Resources”, is devoted to the marine environment as an essential component of life and sustainable development. It recalls that the protection and sustainable development of the marine and coastal environment is reflected in international law, including the provisions of the Convention, and require an integrated approach to marine and coastal area management and development. The chapter also identifies seven programme areas reflecting the fundamental programme of action for achieving sustainable development with respect to oceans and seas: (a) integrated management and sustainable development of coastal areas, including exclusive economic zones; (b) marine environmental protection; (c) sustainable use and conservation of marine living resources of the high seas; (d) sustainable use and conservation of marine living resources under national jurisdiction; (e) addressing critical uncertainties for the management of the marine environment and climate change; (f) strengthening international, including regional, cooperation and coordination; and (g) sustainable development of small islands.

19. For each of these programme areas, Agenda 21 set forth a basis for action, objectives, activities and the means of implementation. It noted that the protection and sustainable development of the marine and coastal environment and its resources would require new approaches to marine and coastal area management and development, at the national, subregional, regional and global levels, approaches that were integrated in content and were precautionary and anticipatory in ambit. It also highlighted, in its paragraph 17.2, that the implementation by developing countries of the activities would be commensurate with their individual technological and financial capacities and priorities in allocating resources for development needs and would ultimately depend on the technology transfer and financial resources required and made available to them.

20. Sections III and IV of the present report detail some of the specific commitments undertaken in chapter 17 and the efforts that have been undertaken to implement them.

B. Nineteenth special session of the General Assembly

21. At its nineteenth special session, held from 23 to 27 June 1997, the General Assembly adopted the Programme for the Further Implementation of Agenda 21 (resolution S-19/2, annex). The programme was based on a review by Member States of progress achieved since the United Nations Conference on Environment and Development.

22. With reference to oceans and seas in paragraph 36 of the programme, the General Assembly highlighted the achievements in the negotiation of agreements and non-binding instruments regarding the conservation and management of fishery resources and the protection of the marine environment. Reference was made to the International Year of the Ocean in 1998 and Member States were encouraged to take full advantage of the opportunity and challenge it presented.

23. It was noted that improvements were needed regarding decision-making at the national, regional and global levels, as well as international cooperation, to assist developing countries in implementing the relevant agreements and instruments.

24. Governments were encouraged to implement decision 4/15 of the Commission on Sustainable Development (E/CN.17/1996/38) on the protection of the atmosphere and protection of the oceans and all kinds of seas, which called for a periodic intergovernmental review of all aspects of the marine environment and its related issues, under the overall legal framework provided by the Convention. All States were encouraged to ratify or accede to relevant agreements and to implement general Assembly resolution 51/189 of 16 December 1996 on the “Institutional arrangements for the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities”. There was an urgent need to reinforce institutional links between relevant intergovernmental mechanisms responsible for integrated coastal zone management. Furthermore, the importance of implementing existing international and regional agreements on marine pollution was highlighted in the context of the Convention and Principle 13 of the Rio Declaration. Governments were urged to prevent or eliminate overfishing and excess fishing capacity and to ensure effective conservation and management of fish stocks, including through a cautious consideration of the use of subsidies. The importance of adequate scientific biological and fisheries data collection and dissemination was emphasized.

C. 2002 World Summit on Sustainable Development

Johannesburg Plan of Implementation

Introduction

25. Ways to better implement Agenda 21 and identify concrete steps and quantifiable targets to achieve sustainable development were further debated by Governments at the World Summit on Sustainable Development in 2002, which adopted the Johannesburg Plan of Implementation. The Plan reiterated the international community’s commitment to the full implementation of Agenda 21, the Millennium Development Goals (see sect. II, D) and other relevant international agreements. It also sets out new commitments and priorities for action on sustainable development, and is divided into 11 chapters, each with its own specific focus. Cross-cutting issues are dealt with in most parts of the Plan, reflecting the fact that sustainable development requires a holistic approach.

Paragraphs 30-36 of the Johannesburg Plan of Implementation

26. Oceans, seas, islands and coastal areas form the core topic of paragraphs 30 to 36 of the Plan. They address, in particular: (a) enhancing effective coordination and cooperation, including at the global and regional levels, between relevant bodies; (b) achieving sustainable fisheries; (c) promoting conservation and management of the oceans; (d) advancing implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and the Montreal Declaration on the Protection of the Marine Environment from Land-based Activities, with particular emphasis during the period from 2002 to 2006 on municipal wastewater, the physical alteration and destruction of habitats, and nutrients; (e) enhancing maritime safety and protection of the marine environment from pollution; (f) taking into account the potential for environmental and human health impacts of radioactive wastes; and (g) improving the scientific understanding and assessment of marine and coastal ecosystems as a fundamental basis for sound decision-making.

27. Sections III and IV of the present report detail some of the specific commitments undertaken in paragraphs 30 to 36 of the Johannesburg Plan of Implementation, as well as the efforts that have been undertaken to implement them.


28. Convened under the outlook of “The role of the United Nations in the twenty-first century” (see A/54/2000), the General Assembly held the Millennium Summit in 2000 and adopted a “United Nations Millennium Declaration” (resolution 55/2). While Member States did not specifically refer to oceans and seas in the Millennium Declaration, they considered as fundamental the need to show prudence in the management of all living and natural resources, in accordance with the precepts of sustainable development. With reference to development and poverty eradication, they resolved to address the special needs of small island developing States by implementing, inter alia, the Barbados Programme of Action. Member States also acknowledged the problems of landlocked countries and called for financial and technical assistance to them. They also emphasized the need for protecting our common environment and reaffirmed their support to the principles set out in Agenda 21.

9 Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002 (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap I, resolution 2, annex

10 Resolution 55/2, para. 6.

29. On 22 September 2010, at its sixty-fifth session, the General Assembly adopted resolution 65/1 entitled “Keeping the promise: united to achieve the Millennium Development Goals”, in which it emphasized, in particular, the need to take measures to ensure the sustainable management of marine biodiversity and ecosystems, including fish stocks, and to tackle the negative effects of climate change on the marine environment and marine biodiversity. The Millennium Development Goals Report (2010)\(^{12}\) had noted that while the proportion of overexploited, depleted and recovering stocks had remained relatively stable since 2000, the negative impact of fisheries had increased with the declining percentage of moderately and underexploited fish stocks.

30. Member States recognized the special needs of and challenges faced by landlocked developing countries and called for the implementation of the 2003 Almaty Programme of Action, which addresses the “Special Needs of Landlocked Developing Countries within a New Global Framework for Transit Transport Cooperation for Landlocked and Transit Developing Countries”.\(^{13}\) Furthermore, concerns were also reiterated about the particular vulnerability of small island developing States to the high risks caused by climate change and sea-level rise. Member States reaffirmed their commitment to addressing those through the implementation of the 2005 Almaty Strategy for the further Implementation of the Programme of Action for the Sustainable Development of small island developing States. They welcomed the five-year high-level review of the Mauritius Strategy, held on 24 and 25 September 2010, to assess progress made in addressing the vulnerabilities of small island developing States.

III. Achievements and implementation of outcomes of major summits on sustainable development

31. The present section provides information on some of the achievements since 1992 in the implementation of the outcomes of the major summits on sustainable development. It is divided into subsections on themes such as: legal and policy frameworks at the global and regional levels; marine biological diversity; sustainable fisheries; marine pollution; climate change and the oceans; and marine science and the transfer of technology. A subsection is also devoted to the special case of small island developing States. As it is not possible to comprehensively reflect the significant developments of the past since 1992 in the present report, reference is made to the annual reports of the Secretary-General on oceans and the law of the sea and sustainable fisheries, which contain further detailed information on those issues.

A. Legal and policy frameworks at the global level

1. Legal framework


32. The recommendations of the United Nations Conference on the Human Environment, held at Stockholm in June 1972, considerably influenced the further development of the law of the sea in the context of the Third United Nations Conference on the Law of the Sea, convened in 1973. The provisions of the Convention adopted by that Conference in 1982 and the acceptance by many States of its regime shaped the discussions and the outcome of the subsequent major summits on sustainable development. Often referred to as “the Constitution of the oceans”, the Convention, with 161 parties, continues to move towards the goal of universal participation, with all regions of the world widely represented. One hundred thirty-five coastal States, 25 landlocked States and one regional economic integration organization are parties to the Convention.

The Convention and the sustainable management of oceans

33. The problems of ocean space are closely interrelated and need to be considered as a whole through integrated, interdisciplinary and intersectoral approaches. In addition, cooperation and coordination at the national, regional and global levels is necessary to supplement the efforts of States in promoting the implementation of the Convention as well as the integrated management and sustainable development of the oceans and seas. Therefore, the mechanisms for the implementation of the Convention and the outcome of major summits have become intrinsically intertwined.

34. As recognized by Agenda 21,\(^{14}\) the Convention sets out the legal framework within which all activities in the oceans and seas must be carried out and is of strategic importance as the basis for national, regional and global action and cooperation in the marine sector, and its integrity needs to be maintained.\(^{15}\) While the Rio Conference was careful in specifying that mentions of the Convention in Agenda 21 did not prejudice the position of any State with respect to signature or ratification of or accession to the Convention, Chapter 17 of Agenda 21 made reference to the provisions of the Convention on several occasions, in particular concerning the protection and preservation of the marine environment, the conservation and sustainable use of marine living resources, both in the high seas and in areas under national jurisdiction, and on marine scientific research.

35. The Convention provides for a careful balance between the rights and obligations of States in the various maritime zones, including with respect to the various uses of the oceans and seas, the management and sustainable use of marine living resources, the protection and the preservation of the marine environment and the development and transfer of marine technology. It therefore sets forth the legal framework necessary for the sustainable development of the oceans and seas.


\(^{15}\) Resolution 65/37, preamble.
36. The Programme for the Further Implementation of Agenda 21 noted the entry into force of the Convention and the adoption of the Agreement on the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982. Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks as achievements of the United Nations Conference on Environment and Development. It also recognized that the Convention provides the overall legal framework for global decision-making on the marine environment. The Johannesburg Plan of Implementation went further by inviting States to ratify or accede to and implement both the Convention and the Agreement, while recognizing the former’s role as the overall legal framework for all ocean activities.

37. The Convention established three institutions: the International Tribunal for the Law of the Sea, the International Seabed Authority and the Commission on the Limits of the Continental Shelf. Even though sustainable development does not represent the focus of any of these institutions, the discharge of their functions indirectly contributes to the achievement of sustainable development. In particular, the International Seabed Authority, which deals with the international seabed area beyond national jurisdiction (the “Area”) and its resources, also undertakes activities to ensure the environmentally sustainable development of the Area and its resources (see paras. 112-114).

38. Since the entry into force of the Convention, States Parties have discussed issues of implementation and application of the Convention.

39. Other global instruments that make up the international legal and policy framework developed since 1992 and relate to specific areas are described in sections III, B to C, below.

2. Policy framework

Commission on Sustainable Development

40. The Commission on Sustainable Development was established as a functional commission of the Economic and Social Council by its decision 1993/207 of 12 February 1993. The role of the Commission as a high-level forum on sustainable development includes to review progress at the international, regional and national levels in the implementation of the recommendations and commitments of the United Nations Conference on Environment and Development; to elaborate policy guidance and options for future activities; and to follow up the Johannesburg Plan of Implementation and achieve sustainable development, including the preservation of the seas, oceans, islands and coastal areas.

41. The Commission on Sustainable Development focused on ocean issues most notably at its fourth and seventh session held in 1996 and in 1999, respectively, prior to the establishment of the Informal Consultative Process in 1999. The Commission on Sustainable Development is expected to review the implementation of Chapter 17 at its twenty-second session in 2014.

42. At its fourth session, held in 1996, the Commission on Sustainable Development reviewed progress in the implementation of the objectives set out in Chapter 17 of Agenda 21 on oceans and seas. Following the meeting of the Commission on Sustainable Development, the Economic and Social Council recommended that the need be stressed for international cooperation, including capacity-building and technology transfer and cooperation, and for the mobilization of financial resources. It also called upon bilateral donors and international, regional and subregional financial institutions and mechanisms, including the GEF, and other competent development and financial institutions to ensure that their programmes gave appropriate priority for country-driven projects aimed at the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (the Global Programme of Action).

43. UNEP was invited to take action to provide for the establishment and implementation of the clearing-house mechanism referred to in the Global Programme of Action. States were also encouraged to take part in its establishment. Non-governmental organizations and major groups were invited to initiate and strengthen their actions to facilitate and support the effective implementation of the Global Programme of Action.

44. At the seventh session of the Commission, held in 1998 and 1999, participants focused on concluding a decision on oceans and seas and paid special attention to the observations, recommendations and proposals produced at the Intersessional Ad Hoc Working Group on Oceans and Seas and on the Sustainable Development of Small Island Developing States (see E.CN/17/1999/20).

45. While noting the progress achieved in the area of oceans and seas, States urged early ratification of the relevant remaining agreements for their early entry into force. Implementation and the building of capacity as well as mobilization of the necessary resources were deemed critical.

46. Coordination between the different parts of national administrations was also necessary to ensure that national action was integrated and that international bodies did not receive conflicting directions from their Member States.

47. With regard to fisheries and other living marine resources, the Commission highlighted the crucial importance of ensuring continuing sustainable supply of food and the need to protect marine biological diversity. It was important for the Commission to make clear that these two concerns underpinned the need for effective and integrated fisheries management and the protection of the habitats of fish and other biota. States launched a call for action to eliminate overfishing and wasteful fishing practices by undertaking national assessments of fish stocks and supporting the work of regional fisheries organizations in improving required scientific data (see para. 24). The need to take early steps to eliminate overcapacity in many fisheries was stressed. Attention was also drawn to the importance of coral reefs, both as indicators of the health of the oceans and seas and as a basis for tourist activities.

48. In its decision 7/1, the Commission emphasized that oceans and seas constituted the major part of the planet that supported life, drive the climate and hydrological cycle, and provide the vital resources for mankind and many other living species. It identified major challenges at the national, regional and global levels to foster the sustainable management of oceans. The Commission
54. Decision 7/1 of the Commission on Sustainable Development on oceans and seas (see para. 48 above) recommended, inter alia, that the General Assembly consider ways and means of enhancing the effectiveness of its annual debate on oceans and the law of the sea. Because of the complex and interrelated nature of the oceans and sea issues, the need for improved international coordination and cooperation, in order to promote the sustainable management and development of the marine environment, particularly, to curb pollution and degradation of the marine environment from land-based and other activities, better scientific understanding of the oceans and seas and their interaction with the world climate system, and encouraged, at the national, regional and global levels, the steps necessary for an effective and coordinated implementation of the provisions of the Convention and Agenda 21 (see also A/61/16, para. 6).

49. The Commission also identified key sectors where further commitments were needed. It urged the international community to support coastal and island developing States in the development of sustainable fisheries and aquaculture. It emphasized both the vital role of those instruments in safeguarding fish stocks and the need to implement them effectively.

50. The Commission endorsed the International Coral Reef Initiative call to action, and encouraged all States to become Parties to, or, as the case may be, to apply the FAO Code of Conduct for Responsible Fisheries of 31 October 1995. The Commission also noted that the Conference on the Law of the Sea was held in Hamburg in 1995, and that the Conference provided an agenda for the development of sustainable fisheries in the region beyond areas of national jurisdiction. The Conference also adopted the Agreement for Fishing Vessels on the High Seas of 4 August 1995 (see sect. III.C.2, below) and the FAO Code of Conduct for Responsible Fisheries of 31 October 1995. The Commission emphasized both the vital role of those instruments in safeguarding fish stocks and the need to implement them effectively.

51. In 2012, the United Nations Conference on Sustainable Development will be held in Brazil to mark the twentieth anniversary of the Earth Summit and the tenth anniversary of the World Summit. The objective of the Conference is to secure new and ambitious commitments at national, regional and global levels, and to develop appropriate policies to facilitate the exploitation of marine living resources and non-living marine resources. The Conference will also provide an opportunity to review progress made in the implementation of the objectives set out in Chapter 14 of Agenda 21 and other key commitments made at major summits and conferences under a consolidated agenda item entitled "Oceans and the Law of the Sea". The General Assembly will also be invited to cooperate with the Conference on the Law of the Sea on the role of the Conference on the Law of the Sea in the context of the Conference on Sustainable Development and the implementation of Agenda 21.

52. The key themes of the Conference will be "Green Economy" and "Institutional Framework for Sustainable Development". The Conference will also provide an opportunity to review progress made in the implementation of the objectives set out in Chapter 14 of Agenda 21 and other key commitments made at major summits and conferences under a consolidated agenda item entitled "Oceans and the Law of the Sea". The General Assembly will also be invited to cooperate with the Conference on the Law of the Sea on the role of the Conference on the Law of the Sea in the context of the Conference on Sustainable Development and the implementation of Agenda 21.
relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (the Working Group). The Working Group was mandated to: (a) survey the past and present activities of the United Nations and other relevant international organizations with regard to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction; (b) examine the scientific, technical, economic, legal, environmental, socio-economic and other aspects of those issues; (c) identify key issues and questions where more detailed background studies would facilitate consideration by States of those issues; (d) indicate, where appropriate, possible options and approaches to promote international cooperation and coordination for the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. The mandate of the Working Group offers an opportunity to consider all the issues relating to marine biological diversity beyond areas of national jurisdiction in an integrated, cross-cutting and cross-sectoral manner.

59. The Working Group has met in 2006, 2008 and 2010 and a meeting is scheduled to be held from 31 May to 3 June 2011. At the meetings, the central role of the General Assembly as the global institution with competence to deal comprehensively with complex and multidisciplinary issues, such as those relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, was reiterated (A/61/65, para. 7). In the context of its mandate, it has focused on issues such as the environmental impacts of anthropogenic activities; cooperation and coordination among States and relevant organizations and bodies; area-based management tools, including marine protected areas; genetic resources; whether there is a governance or regulatory gap and if so how it should be addressed; environmental impact assessments; strengthening the information base; capacity-building and technology transfer; and cooperation and coordination in implementation and for integrated ocean management and ecosystem approaches (for further information, see A/61/65, A/63/79, A/65/68 and A/66/70).

The Regular Process for global reporting and assessment of the state of the marine environment, including socio-economic aspects

60. In paragraph 36 (b) of the Johannesburg Plan of Implementation, States agreed to “establish by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments” (the Regular Process). The General Assembly endorsed that call in paragraph 45 of its resolution 57/141 of 16 December 2002 and has continuously reiterated the need to strengthen the regular scientific assessment of the state of the marine environment in order to enhance the scientific basis for policymaking.

61. By resolution 60/30 of 29 November 2005, the General Assembly launched the start-up phase to the Regular Process, called the “assessment of assessments”, which concluded in 2009 with a report on the results of the assessment of assessments (see A/64/88, annex).


The Assembly endorsed the recommendations adopted by the Working Group of the Whole that proposed a framework for the Regular Process, described its first cycle and a way forward. The framework consists of the overall objective and scope; a set of principles guiding the establishment and operation of the Regular Process; and best practices on key design features. Capacity-building, the sharing of data, information and the transfer of technology are also crucial elements of the Regular Process. In the first cycle, the Regular Process will focus on establishing a baseline for the state of the marine environment. In subsequent cycles, the scope would extend to evaluating trends (see A/64/347).

63. At its meetings, the Working Group of the Whole agreed that the Regular Process should aim at strengthening the science-policy interface for the sustainable use, management and conservation of the oceans and seas and their resources and biodiversity, as well as long-term human well-being and sustainable development. The Working Group of the Whole recalled the important role that oceans played in meeting internationally agreed commitments related to sustainable development and the Millennium Development Goals and how the Regular Process could contribute to achieving those commitments.

64. At its sixty-fifth session, the General Assembly decided that the Regular Process would be an intergovernmental process. It also decided on institutional arrangements for the Regular Process, including an Ad Hoc Working Group of the Whole of the General Assembly to oversee and guide the Regular Process and a Group of Experts (see resolution 65/37, paras. 197 to 217). The first meeting of the Ad Hoc Working Group of the Whole was held in February 2011 (A/65/759).

65. UNESCO noted that there were possible modalities of coordination between the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (see para. 226 below) and the Regular Process. IOC reported that it was currently leading the two marine components of the GEF Transboundary Water Assessment Programme, for the Large Marine Ecosystems and the open ocean (see A/66/70, sect. II.J.1), which were expected to contribute to the Regular Process.

66. UNEP provides leadership and encourages partnership in caring for the environment, including the marine environment, by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. It facilitates and promotes the wise use of the planet’s natural assets for sustainable development, by inter alia, integrating economic

23See A/64/347 and A/65/358.
24UNESCO contribution.
25IOC contribution.
26Contribution of the Department of Economic and Social Affairs of the Secretariat.
development and environmental protection and facilitating the transfer of knowledge and technology for sustainable development. It hosts a number of environmental convention secretariats, including the Convention on Biological Diversity. It was established in 1972 after the United Nations Conference on the Human Environment. In 2002, the World Summit reaffirmed the central role of UNEP in international efforts to achieve sustainable development. UNEP works to develop policy guidelines to address major environmental issues, such as the degradation of the marine environment. It has also initiated a ministerial-level intergovernmental process to strengthen environmental governance and reinvigorate global commitment to sustainable development.27

67. Under the Medium-Term Strategy of UNEP for 2010-2013,28 the Marine and Coastal Strategy has been developed to focus on priority issues for maintaining marine ecosystems and their services for human well-being. The Strategy is implemented by UNEP’s Marine and Coastal Ecosystem Branch, which is responsible for coordinating the Regional Seas Programme, the Global Programme of Action, Marine Ecosystems Management and Small Island Developing States. Almost all Branch activities strive to implement relevant outcomes of summits on sustainable development. The Branch intends to increase its collaboration with other United Nations agencies, research institutions and non-governmental organizations to meet its objectives.29 UNEP also promotes the use of sound science to apply ecosystem management to address factors causing the decline of ecosystem services in marine and coastal areas.

B. International cooperation and coordination

1. At the international level

UN-Oceans

68. Paragraph 17.118 of Agenda 21 called for enhanced coordination among United Nations organizations with major marine and coastal responsibilities and institutions and specialized agencies dealing with development, trade and other related economic issues. That led to the establishment of the Sub-committee on Oceans and Coastal Areas of the Administrative Committee on Coordination, whose task was, inter alia, to monitor and review the implementation of Chapter 17. Taking into account the decisions of the World Summit30 and the third meeting of the Informal Consultative Process (A/57/80), the General Assembly established in its resolution 58/240 the Oceans and Coastal Areas network (known as UN-Oceans), as an “effective, transparent, and regular inter-agency coordinating mechanism on oceans and coastal issues within the United Nations”.31

69. UN-Oceans operates as a mechanism to review joint and overlapping ongoing activities and to support related deliberations at the Informal Consultative Process, in particular by (a) enhancing cooperation and coordination among the secretariats of the international organizations and bodies concerned with ocean-related activities; (b) reviewing programmes and activities and identifying issues needing to be addressed, with a view to updating and enriching the relationship between the Convention and Agenda 21; (c) ensuring integrated ocean management at the international level; and (d) undertaking joint activities to address emerging challenges and issues.32

70. To foster coordination and joint activities and pursue time-bound initiatives, UN-Oceans has established task forces on key issues. The task force on the Regular Process was created in support, inter alia, of the Assessment of Assessments. The task force on marine protected areas aims in particular at addressing the goals and targets of the Convention on Biological Diversity and the World Summit (see sect. III, C and D). The task force on biodiversity in marine areas beyond national jurisdiction was established to facilitate, as appropriate, the implementation of relevant recommendations of the General Assembly addressed to competent international organizations to achieve a coordinated approach and follow-up action by relevant organizations.33 In addition to its task forces, UN-Oceans provides oversight and direction to the United Nations Atlas of the Oceans (www.oceansatlas.org), a web-based information system bringing together data on ocean and marine sustainable development and management issues, maps and development trends produced by the United Nations system and selected partners.

71. While UN-Oceans is of the view it can play an important role in the management of the oceans, there is a general consensus on the need for strategic planning to strengthen the structure of UN-Oceans and raise its profile and visibility. Such can be achieved by, for example, strengthening cooperation between similar mechanisms, such as UN-Water.34 Moreover, UN-Oceans noted that the United Nations system could not fulfil all the goals entrusted to it without adequate funding and support from Member States.35

2. At the regional level

72. Implementation of the outcomes of the major conferences on sustainable development has also been undertaken at the regional level through various regional organizations and cooperation mechanisms. There follow some examples in that regard, as well as specific examples of implementation at the regional level in sections relating to specific thematic areas.

UNEP regional seas programmes

73. The UNEP Regional Seas Programme was launched in 1974. The Programme aims to address the accelerating degradation of the world’s oceans and coastal areas through the sustainable management and use of the marine and coastal environment, by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment.36

74. More than 140 countries participate in 13 regional seas programmes established under the auspices of UNEP: Black Sea, Wider Caribbean, East Asian

29 UNEP contribution.
30 Johannesburg Plan of Implementation (note 9, above), para. 30 (c).
31 A/59/62, para. 296.
32 A/60/63, para. 316.
33 A/65/69/Add.2, para. 407.
34 A/65/69/Add.2, para. 410.
35 A/65/174, para. 132.
36 Available from www.unep.org/regionalseas/about/default.asp.
Seas, Eastern Africa, South Asian Seas, Sea area of the Regional Organization for the Protection of the Marine Environment, Mediterranean, North-East Pacific, North-West Pacific, Red Sea and Gulf of Aden, South-East Pacific, Pacific and Western Africa.

75. Most of the programmes function through action plans that are adopted by Member States in order to establish a comprehensive strategy and framework for protecting the environment and promoting sustainable development. An action plan outlines the strategy and substance of the programme, based on the region’s particular environmental challenges as well as its socio-economic and political situation.

76. A number of legally binding conventions have been adopted by the programmes to tackle common environmental issues through joint coordinated activities. Most conventions have added protocols addressing specific issues such as protected areas or land-based pollution. The General Assembly has encouraged States that have not done so to become parties to the regional seas conventions.37

77. Global meetings of the regional seas conventions and action plans take place annually. The twelfth meeting took place in Bergen, Norway from 20 to 22 September 2010. Many activities undertaken by the various regional seas programmes to promote sustainable development have been featured in recent reports of the Secretary-General on oceans and the law of the sea.38

Partner regional seas programmes

78. In addition to the UNEP regional seas programmes, there are five partner programmes for the Antarctic, Arctic, Baltic Sea, Caspian Sea and North-East Atlantic regions. Although these programmes have not been established under the auspices of UNEP, they participate in the global meetings of the regional seas, share experiences and exchange policy advice and support to the developing regional seas programmes. The role of the global regional seas programme is to enhance linkages, coordination and synergies within and among global, regional and partner programmes, organizations and actors. In return, the partner programmes support the internationalization of the global regional seas strategic directions and report regularly on their progress. These programmes similarly undertake diverse activities to promote sustainable development of the oceans.

79. The Antarctic, Baltic Sea, Caspian Sea and North-East Atlantic programmes are based on binding instruments that protect the marine environment.39 In the Arctic, the Arctic Council is a high-level intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, with the involvement of Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular sustainable development and environmental protection in the Arctic.40

80. On 10 October 2007, the European Commission presented its vision for an “Integrated Maritime Policy for the European Union” (COM (2007) 575)41 with a view to gradually reaching an integrated, coherent and common decision-making procedure for oceans, seas, States, coastal regions and maritime sectors within the European Union. The Integrated Maritime Policy, by promoting multi-sector and multi-level maritime governance, directly involves coastal regions in environmental, maritime transport, energy, research, industry, fisheries and innovation policies, which are all crucial underpinnings of sustainable development.

81. Over recent years, the Integrated Maritime Policy has been further enriched by specific contributions such as its environmental pillar, the 2008 Marine Strategy Framework Directive,42 and the 2009 Communication from the European Commission, entitled “Towards an Integrated Maritime Policy for better governance in the Mediterranean”.43

82. The Integrated Maritime Policy for better governance in the Mediterranean aims to improve the ability of coastal States to respond together to the maritime challenges facing the Mediterranean sea basin. That includes the strengthening of integrated coastal zone management in coastal areas and islands, the development of marine knowledge and integration between marine and maritime research efforts, as the basis of an ecosystem-based approach to the management of activities at sea. In addition, the surveillance of maritime activities and operations in the Mediterranean will be continued.

African Union

83. In October 2009, the African Union adopted the African Maritime Transport Charter and Plan of Action to build trade capacity and envision a united approach to industry threats such as piracy.44 That charter recognizes the interdependence between economic development and a sustainable policy for the protection and preservation of the marine environment, as well as the need for Africa to fully and effectively implement the 2003 Almaty Declaration and Programme of Action on addressing the special needs of landlocked developing countries. It also recognizes the importance of the role of maritime transport in the promotion of economic development and the achievement of the Millennium Development Goals. The Durban Resolution and Plan of Action on Maritime Transport were also adopted in the same year.45

84. NEPAD has developed an action plan46 under its Environment Initiative aimed at addressing the region’s environmental challenges to ensure sustainable development and poverty alleviation. Reference is made to coastal management as one of the eight sub-themes of the Initiative.47 The action plan was developed in

37 Resolution 65/37, para. 133.
38 A/66/70/Add.1, sect. XI, L.
40 See http://arctic-council.org/article/about.
close cooperation with the African Union and with the support of UNEP and the Global Environment Facility.

85. The action plan includes clusters of programmatic and project activities on: marine and coastal resources; cross-border conservation of natural resources; climate change; and cross-cutting issues building upon the related problems of, inter alia, pollution, capacity-building and technology transfer.

86. The Environment Initiative recognizes that marine and coastal ecosystems contribute significantly to the economies of NEPAD countries, based on estimates indicating that over 40 per cent of Africa’s population derives its livelihood from coastal and marine ecosystems and resources that are under increasing stress from a wide array of anthropogenic impacts. The situation is more aggravated in some of Africa’s small island States.

Pacific Islands Regional Ocean Policy

87. Ocean and coastal resources and environments are of vital importance to the nations, communities and individuals of the Pacific Islands. The Pacific Islands Regional Ocean Policy is48 supported by 22 Pacific island countries and territories and underscores the continuing importance of these resources and environments to sustainable development.

88. The Pacific Islands Regional Ocean Framework for Integrated Strategic Action serves as a guide for regional coordination, integration and collaboration on ocean issues in keeping with the Policy’s goal of improving ocean governance and ensuring sustainable use of the ocean and its resources.

89. The Marine Sector Working Group of the Council of Regional Organisations in the Pacific was tasked with developing a regional ocean policy, which was subsequently endorsed in 2002 by the thirty-third Pacific Islands Forum. Forum leaders also called for follow-up action plans, both for the region and for individual countries.

C. Implementation in thematic areas

1. Conservation and sustainable use of marine biodiversity

90. The Earth’s biological resources are vital to life and people’s economic and social development. As recognized by paragraph 15.3 of Agenda 21, biological resources constitute a capital asset with great potential for yielding sustainable benefits. Among many ecosystem services, they produce a third of the oxygen that we breathe, offer a valuable source of protein and have a role in the global climate cycle. Despite the value of the services provided, the loss of the world’s biological diversity, in particular marine biodiversity, has continued, mainly as a result of habitat destruction, overharvesting, pollution and invasive alien species.

91. Chapter 15 of Agenda 21 identified a number of activities related to management, data and information, as well as international and regional cooperation and coordination in order to achieve the conservation of biodiversity and the sustainable use of biological resources.

92. Chapter 17 specifically relates to marine biodiversity and should be read in conjunction with Chapter 15. It requires coastal States, with the support of international organizations, to undertake measures to maintain the biodiversity and productivity of marine species and habitats under their national jurisdiction. States are required to identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas, and should provide necessary limitations on uses in these areas, through, inter alia, the designation of protected areas. Priority should be accorded to coral reef ecosystems; estuaries; temperate and tropical wetlands, including mangroves; seagrass beds; and other spawning and nursery areas. States, individually or through bilateral and multilateral cooperation, are also required to complete or update marine biodiversity, marine living resource and critical habitat profiles of exclusive economic zones and other areas under national jurisdiction, taking account of changes in the environment brought about by natural causes and human activities. Marine biodiversity is also referred to in relation to small island developing States.

93. At the World Summit, States committed, inter alia, to maintaining the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction, and to implementing the work programme arising from the Jakarta Mandate on Marine and Coastal Biological Diversity. They also called for the development of diverse tools, including the ecosystem approach and the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks, by 2012. States urged the development of national, regional and international programmes for halting the loss of marine biodiversity and implementing the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention), including its joint work programme with the Convention on Biological Diversity and the programme of action called for by the International Coral Reef Initiative to strengthen joint management plans and international networking for wetland ecosystems in coastal zones.

94. At the World Summit, States also committed to achieving by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth. In order to do so, States noted the need for the provision of new and additional financial and technical resources to developing countries. They further committed to a number of actions at all levels for the conservation and sustainable use of biodiversity.

95. While the 2010 target was not met, a number of activities have been undertaken in the context of the Convention on Biological Diversity, the General Assembly and other fora towards the conservation and sustainable use of marine biodiversity.

Developments within the Convention on Biological Diversity

96. In response to the global decline in biodiversity, and following four years of negotiations, the Convention on Biological Diversity opened for signature on 5 June

50 Johannesburg Plan of Implementation (note 9 above), para. 32.
51 Ibid., para. 44.
1992 at the United Nations Conference on Environment and Development and entered into force on 29 December 1993. The Convention, which has for objectives the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits from the use of genetic resources, has 193 parties. It applies in areas within the limits of national jurisdiction in the case of components of biological diversity and within national jurisdiction or beyond in the case of processes and activities, regardless of where their effects occur, carried out under a State’s jurisdiction or control (article 4). With respect to the marine environment, the Parties to the Convention on Biological Diversity are required to implement it consistently with the rights and obligations of States under the law of the sea (article 22).

97. The decisions of the Conference of the Parties, based on advice from its Subsidiary Body for Scientific, Technical and Technological Advice (the Subsidiary Body) have sought to operationalize the three objectives of the Convention on Biological Diversity (see para. 96). Marine and coastal biodiversity was an early priority for the Conference of the Parties of the Convention on Biological Diversity. In particular, the Conference of the Parties adopted decision IV/54 on the conservation and sustainable use of marine and coastal biological diversity which included a programme of work arising from decision II/10. The programme contained elements on integrated marine and coastal area management; marine and coastal living resources; marine and coastal protected areas; mariculture; alien species; and genotypes.

98. The Conference of the Parties has continuously reviewed the implementation of the programme of work and provided guidance to Parties, the Convention on Biological Diversity Secretariat and the Subsidiary Body on further actions needed in the implementation of the elements of the programme of work. The programme of work was expanded at the fifth meeting of the Conference of the Parties, held in Nairobi in 2000, to include a work element on coral reefs, accompanied by a workplan on coral bleaching. In 2004, the Conference of the Parties adopted an elaborated programme of work, which included activities designed to help the Parties to overcome obstacles to implementation and relevant activities from the Johannesberg Plan of Implementation. At its tenth meeting, held in Nagoya, Japan in 2010, the Conference of the Parties noted with concern that progress in the implementation of the programme had not been able to prevent the serious decline in marine and coastal biodiversity and ecosystem services (decision X/29).

99. Coral reefs, including coral bleaching, have been a particular area of attention for the Parties. Over the years, the Conference of the Parties has also considered new and emerging issues affecting marine biodiversity, including marine biodiversity beyond areas of national jurisdiction. In 2006, the Conference of the Parties discussed the conservation and sustainable use of deep seabed genetic resources beyond the limits of national jurisdiction. In 2006, the Conference of the Parties expressed its deep concern over the range of threats to marine ecosystems and biodiversity beyond national jurisdiction, and recognized that marine protected areas were an essential tool to help achieve conservation and sustainable use of biodiversity in these areas. It also recognized that the Convention on Biological Diversity had a key role in supporting the work of the General Assembly with regard to those areas beyond national jurisdiction (see paras. 57-59), by focusing on provision of scientific and, as appropriate, technical information and advice.

100. In 2008, in decision IX/20, the Conference of the Parties adopted scientific criteria for identifying ecologically or biologically significant marine areas in need of protection and scientific guidance for designing representative networks of marine protected areas, and took note of the four initial steps to be considered in the development of representative networks of marine protected areas.

101. Also at that meeting, the Executive Secretary of the Convention on Biological Diversity was requested to compile and synthesize scientific information on the potential impacts on marine biodiversity of both direct human-induced ocean fertilization to sequester carbon dioxide and ocean acidification. In its decision on biodiversity and climate change (decision IX/16), the Conference of the Parties also recognized the current absence of reliable data covering all relevant aspects of ocean fertilization and requested the Parties to ensure that ocean fertilization activities do not take place until there was an adequate scientific basis on which to justify such activities (see also para. 202).

102. In 2010, in decision X/29, the Conference of the Parties reaffirmed that the programme of work still corresponded to global priorities and had been further strengthened while not fully implemented. It therefore provided guidance for enhanced implementation, including with respect to marine biodiversity. It also specifically elaborated further guidance on the identification of ecologically and biologically significant areas and scientific and technical aspects relevant to environmental impact assessment in marine areas; and the impacts of unsustainable fishing, ocean fertilization, ocean acidification, and other human activities. By decision X/13, the Conference of the Parties also requested the Subsidiary Body to consider the impacts of ocean acidification on marine species and habitats and to take into account, in the implementation of the programmes of work on protected areas and on marine and coastal biodiversity, the impact of ocean noise on marine protected areas (see also sect. IV.C.6 below).

103. The new Strategic Plan, adopted by the Conference of the Parties at its tenth meeting and aimed at achieving a significant reduction of biodiversity loss by 2020, includes a number of targets relevant to marine biodiversity. In particular, by decision X/2, it was agreed that, by 2020, at least 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services would be conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider seascapes. The Strategic Plan also aims to minimize the anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted by climate change or ocean acidification by 2015, so as to maintain their integrity and functioning (see also sect. IV.C.2).

104. The annual reports of the Secretary-General on oceans and the law of the sea have provided greater details on the measures and activities undertaken in the

53 Available from www.cbd.int/convention/parties/list/.
54 Available from www.cbd.int/decision/cop/?id=7128.
55 See https://cbd.int/marine/pow.shtml.
56 For a summary of the relevant activities undertaken, see http://cbd.int/marine/coral.shtml.
context of the Convention on Biological Diversity in relation to the above-mentioned decisions.\footnote{See A/65/69, para. 172; A/65/69/Add.2, paras. 199-202 and A/66/70, paras. 68, 76, 99, 104, 110, 157, 162, 163, 170 and 171.}  

Developments in other forums

105. Marine biodiversity is addressed in a number of other conventions and forums, in the context of which decisions have been adopted and activities undertaken for the conservation and sustainable use of marine species and habitats. The annual reports of the Secretary-General on oceans and the law of the sea provide information on the activities undertaken in the context of these conventions and forums. Additional information is also found throughout the present report.

Biodiversity-related conventions and initiatives

106. The Convention on International Trade in Endangered Species of Wild Flora and Fauna was adopted in 1973. It entered into force in 1975 and has 175 Parties. It aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival, by banning commercial international trade in an agreed list of endangered species and by regulating and monitoring trade in others that might become endangered. The import, export, re-export and introduction from the sea of species covered by that Convention has to be authorized through a licensing system. Marine species are listed under that Convention, including some species of sea turtles, great whales, the basking and whale sharks, the entire genus of seahorses and dolphins.

107. The secretariat of the Convention on International Trade in Endangered Species indicated that it was in the process of preparing its contribution to the United Nations Conference on Sustainable Development. With regard to progress to date, remaining gaps and new or emerging challenges, it highlighted that in the context of the 2010 biodiversity target, although the target of having no species of wild flora and fauna endangered by international trade was not achieved globally, some progress had been made and success achieved through the implementation of that Convention. It drew attention to a number of its activities to address emerging issues, gaps and challenges, including (a) participation in a number of initiatives such as the Biodiversity Indicators Partnership, the Green Economy Report,\footnote{Available from http://unep.org/greeneconomy/GreenEconomyReport/tabid/1375/Default.aspx.} The Economics of Ecosystems and Biodiversity,\footnote{See http://teebweb.org/.} and meetings on an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (see para. 226); (b) enhanced cooperation with biodiversity-related conventions, the Rio Conventions, the International Convention for the Regulation of Whaling, the natural resource sector, including FAO and the International Commission for the Conservation of Atlantic Tuna, the trade sector, including UNCTAD and WTO, the financial sector, including GEF and the World Bank, and the law enforcement sector, including the United Nations Office for Drugs and Crime, Interpol and the World Customs Organization; (c) enhancement of the complementarity between that Convention and intergovernmental bodies and agreements addressing marine species; and (d) continuing work on a common understanding and uniform implementation of the provisions of the Convention on introduction from the sea.\footnote{More information is available from www.unep-wcmc-apps.org/isdb/Taxonomy/ and from http://groms.gbif.org/.}  

108. In response to recommendation 32 of the Action Plan adopted by the 1972 United Nations Conference on Human Environment,\footnote{Available from http://unep.org/greeneconomy/GreenEconomyReport/tabid/1375/Default.aspx.} the Convention on Migratory Species of Wild Animals was adopted in 1979 and entered into force in 1983. Today, it has 115 parties. That Convention, in its preamble, recognizes that wild animals are an irreplaceable part of the Earth’s natural system, which must be conserved for the good of mankind and the value of wild animals from environmental, ecological, genetic, scientific, aesthetic, recreational, cultural, educational, social and economic points of view. That Convention includes provisions for the protection of migratory species and their habitats. The conclusion of multilateral agreements and memorandums of understanding is required for the conservation and management of migratory species. Several of the agreements concluded to date specifically cover marine species.\footnote{See "Ramsar’s Liquid Assets" commemorative book — 40 years of the Convention on Wetlands (2011).} Information management systems have been established to provide information on the species, geographic information system maps and population data, among others.\footnote{Secretariat of the Convention on International Trade in Endangered Species contribution.} A number of other conservation activities have been undertaken that have contributed to sustainable development and sought to achieve the targets of the World Summit.\footnote{See “Ramsar’s Liquid Assets” commemorative book — 40 years of the Convention on Wetlands (2011).}  

109. Wetlands are among the world’s most productive environments, providing numerous ecosystem services such as freshwater supply, food and building materials, biodiversity, flood control, groundwater recharge and climate change mitigation.\footnote{The text of the agreements and memorandums of understanding is available at http://cms.int/species/index.htm.} The Ramsar Convention was adopted in 1971 and entered into force in 1975. It has 160 contracting parties. The Convention’s objective is the conservation and wise use of all wetlands through local, national and regional actions and international cooperation, as a contribution towards achieving sustainable development throughout the world. Under the Ramsar Convention, Parties must, among other actions, designate wetlands for inclusion in the Ramsar List and promote their conservation, as well as the wise use of wetlands in their territory. The definition of wetlands in the Ramsar Convention includes most coastal zones around the world. To date, a large number of the 1929 sites included on the Ramsar List, are coastal and marine wetlands.\footnote{See http://ramsar.org.} A number of activities, including awareness-raising and assistance programmes, have contributed to the implementation of the Ramsar Convention and sought to contribute to the achievement of the targets of the World Summit.
United Nations Educational, Scientific and Cultural Organization

110. Proposals to conserve natural sites along with cultural sites were presented to the United Nations Conference on Human Environment, held in Stockholm in 1972. The Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention) was adopted by the General Conference of UNESCO in 1972 and entered into force in 1975. It has 187 States Parties. The World Heritage Committee established pursuant to article 8 of the Convention has developed operational guidelines for inscription of properties on the World Heritage List and the List of World Heritage in Danger. A number of marine areas are included on the lists. In addition, the World Heritage Marine Programme aims to safeguard the world’s marine cultural and natural heritages by assisting States Parties with the nomination of marine properties and with the effective management of those sites. The programme provides ongoing technical support that includes training workshops, fund-raising and designing and implementing projects targeting existing and potential marine sites.

111. The Man and the Biosphere Programme of UNESCO is an intergovernmental initiative launched in the early 1970s. It notably targets the ecological, social and economic dimensions of biodiversity loss. Over the years, the work of the Programme has concentrated on the development of the World Network of Biosphere Reserves, which are areas of terrestrial and coastal/marine ecosystems or a combination thereof, with interconnected functions such as the conservation of landscapes, ecosystems, species and genetic variation; development; and logistic support through research, monitoring, environmental education and training. There are 563 sites worldwide in 109 countries, a number of which encompass coastal and marine areas. Coastal marine biosphere reserves are reference sites for monitoring coastal and marine biodiversity, observing and measuring human impacts on the coastal/marine habitats and developing rigorous and innovative guidelines for their conservation and sustainable management.

International Seabed Authority

112. In accordance with article 145 of the Convention on the Law of the Sea, the International Seabed Authority (the "Authority") is responsible for taking necessary measures, with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects that may arise from such activities. The regulations on prospecting and exploration for polymetallic nodules and for polymetallic sulphides provide for the application by the Authority and sponsoring States of the precautionary approach, as reflected in principle 15 of the Rio Declaration. The Legal and Technical Commission of the Authority is also empowered to make recommendations to the Council on the implementation of that principle. The Sulphides Regulations, adopted in May 2010, include numerous provisions on the management of risks to biodiversity, including on special features, such as vulnerable marine ecosystems.

113. Environmental impact assessments have become one of the most effective and practical tools to support the implementation of sustainable development and figure significantly in the rules, regulations and procedure of the Authority.

114. Furthermore, one of the operational objectives of the proposed environmental management plan throughout the Clarion-Clipperton Fracture Zone, which the Legal and Technical Commission will review during the seventeenth session of the Authority in 2011, is to undertake cumulative environmental impact assessments, as necessary, based on future exploitation proposals. In future, it is very likely that the regulations on the exploitation of polymetallic nodules and other resources such as polymetallic sulphides and cobalt crusts will include provisions on the obligation to undertake environmental impact assessments of the proposed activities by contractors.

115. With regard to the establishment of marine protected areas, a proposal is under consideration by the Legal and Technical Commission for the establishment of a representative network of areas of environmental interest throughout the Clarion-Clipperton Zone provided by members of the Authority. That unprecedented initiative represents a considerable area covering approximately 4.5x10^6 km^2.

2. Sustainable fisheries

116. Fisheries are a major contributor to economic development, food security and the cultural and social welfare of many countries. In 2008, capture fisheries and aquaculture production was approximately 142 million tons, of which marine capture production was 79.5 million tons. Almost 81 per cent of world fish production was destined for human consumption and provided 3 billion people with at least 15 per cent of their animal protein. The share of fishery and aquaculture production entering international trade also increased from 25 per cent in 1976 to 39 per cent in 2008 and the value of world exports reached a record value of $102 billion.

117. Employment in fisheries and aquaculture has grown substantially in the past three decades, with an average rate of increase of 3.6 per cent per year since 1980. In 2008, 44.9 million people were employed in capture fisheries or in aquaculture, at least 12 per cent of whom were women. For each person employed in capture fisheries and aquaculture production, approximately three jobs are produced in secondary activities, with a total of more than 180 million jobs in the entire fish industry. Employment in the fisheries sector has grown faster than the world’s population and faster than employment in traditional agriculture.

118. It remains the case, however, that the contribution of fisheries to sustainable development depends on the continuing health of functioning, productive ecosystems. Unfortunately, the proportion of marine fish stocks estimated to be underexploited or moderately exploited declined from 40 per cent in the mid-1970s to 15 per cent in 2008, and the proportion of overexploited, depleted or recovering stocks increased from 10 per cent in 1974 to 32 per cent in 2008. The need for improvements in oceans and fisheries governance, in particular the adoption and
implementation of integrated, ecosystem-based approaches relying on the best available science, has been widely recognized.  

119. The United Nations Conference on Environment and Development (UNCED) and the World Summit identified a wide range of challenges and corresponding actions for the sustainable use and conservation of marine living resources in areas under national jurisdiction and on the high seas. Despite actions taken by States and relevant organizations, many of these problems remain today, including illegal, unregulated and unreported fishing, overfishing, overcapacity, inadequate flag State control, excessive by-catch and discards, inadequate data collection and reporting, lack of science, ineffective monitoring, control and surveillance, degradation of vulnerable marine ecosystems and the need for transfer of technology and capacity-building.

120. The following section highlights some of the significant achievements of the international community in implementing the outcomes of the major summits on sustainable development relating to sustainable fisheries, including some recent developments.

121. The General Assembly has adopted a wide range of decisions and recommendations relating to marine living resources, since as early as 1955. These decisions and recommendations have also involved the implementation of Chapter 17 of Agenda 21 and Chapter IV of the Johannesburg Plan on implementation of the sustainable use and conservation of marine living resources in areas under national jurisdiction and in the high seas. Since 2003 (resolution 58/14), issues relating to the conservation and sustainable use of marine living resources have been consolidated and considered by the General Assembly in its annual resolutions on sustainable fisheries.

122. Recent efforts of the General Assembly have focused on addressing the impacts of bottom fishing on vulnerable marine ecosystems (see sect. IV, B, 6). Reviews were conducted by the General Assembly in 2006 and 2009 on the actions taken by States and regional fisheries management organizations and arrangements to address the impacts of bottom fishing on vulnerable marine ecosystems. A further review will be conducted in 2011 with a view to ensuring effective implementation of the measures and to make further recommendations, where necessary.

123. Issues relating to sustainable fisheries have also been considered by the Informal Consultative Process and the Working Group. In particular, the Informal Consultative Process agreed at its sixth meeting on a wide range of elements relating to fisheries and their contribution to sustainable development, many of which were incorporated in the resolutions of the General Assembly on oceans and the law of the sea and on sustainable fisheries.

The 1995 United Nations Fish Stocks Agreement

124. Articles 63 (2) and 64 of the Convention set out the overarching legal regime for the conservation and management of marine living resources including straddling fish stocks and highly migratory fish stocks. In the light of ongoing problems regarding the conservation and management of those stocks, Agenda 21 (chap. 17, para. 17.49 (c)) called for the convening of an intergovernmental conference under United Nations auspices to promote effective implementation of these provisions.

125. Pursuant to General Assembly resolution 47/192, the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks was convened in 1993 and completed its work in 1995 with the adoption of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the Agreement). The Agreement entered into force on 11 December 2001 and currently has 78 States parties, including the European Union.

126. The Agreement sets out the legal regime for the conservation and management of straddling and highly migratory fish stocks, with a view to ensuring their long-term conservation and sustainable use. The conservation and management of such stocks must be based on the precautionary approach and the best scientific evidence available. The Agreement also elaborates on the fundamental principle established in the Convention that States should cooperate in taking the measures necessary for the conservation of those resources. Measures adopted for areas under national jurisdiction and established in the high seas are required to be compatible and consistent with the measures adopted under the Convention. Moreover, the Agreement also recognizes the special requirements of developing States, including in the development of their own fisheries and in their participation in high seas fisheries for such stocks.

127. In 2006, in accordance with article 36 of the Agreement, a Review Conference was convened to assess the effectiveness of the Agreement and its provisions in securing the conservation and management of straddling fish stocks and highly migratory fish stocks, and, if necessary, to propose means of strengthening the substance and methods of implementation of those provisions in order to better address any continuing problems in the conservation and management of those stocks.

128. The Review Conference addressed ways to give full effect to the Agreement, both through a substantive review and assessment and by agreeing on recommendations for strengthening the implementation of the Agreement. Those recommendations related to the conservation and management of stocks; mechanisms for international cooperation and non-members; monitoring, control and surveillance and compliance and enforcement; and developing States and...
non-parties.86 In regard to the latter, the Conference recommended that States exchanged ideas on ways to promote further ratification and accession to the Agreement through a continuing dialogue to address concerns raised by some non-parties. 

129. In 2010, the resumed Review Conference conducted a review of the implementation of the recommendations adopted at the Review Conference in 2006 and adopted additional recommendations.87 The Conference also recommended that the informal consultations of States Parties to the Agreement continued and that the Agreement be kept under review through a resumption of the Review Conference at a date not earlier than 2015.88 In paragraphs 31 and 32 of its resolution 65/38 of 7 December 2010, the General Assembly encouraged accelerated progress by States and regional fisheries management organizations and arrangements regarding the recommendations adopted by the Review Conference in 2006 and 2010.

130. Pursuant to requests of the General Assembly, the Informal Consultations of States Parties to the Agreement were held on an annual basis between 2002 and 2010. The meetings have provided States with a forum to discuss issues relating to the implementation of the Agreement and to take preparatory steps for the Review Conference and the resumed Review Conference.

131. The Informal Consultations have also contributed to the consideration by the General Assembly of its agenda item on oceans and the law of the sea. Specific outcomes of the meetings of the Informal Consultations have included: recommendations on the establishment of the Assistance Fund under Part VII of the Agreement; development and adoption of terms of reference for the Assistance Fund; consideration and adoption of preparatory documents for the Review Conference in 2006 and the resumed Review Conference in 2010; and a continuing dialogue, in particular with developing States, to promote a wider participation in the Agreement.

The Food and Agriculture Organization of the United Nations

132. The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (the Compliance Agreement) was adopted in 1993 and entered into force in 2003. The aim of the Compliance Agreement is to strengthen compliance with conservation and management measures in the high seas by setting out the responsibilities of flag States and by strengthening international cooperation and transparency in the exchange of information. In particular, the Compliance Agreement seeks to encourage States to take effective action, consistent with international law, to deter the reflagging of vessels (see also sect. IV, B, 2).89

133. The FAO Code of Conduct for Responsible Fisheries and related International Plan of Actions was adopted as a voluntary instrument following the 1992 International Conference on Responsible Fishing and the United Nations Conference on Environment and Development. The Code established principles for responsible fishing and fisheries activities, taking into account relevant biological, technological, economic, social, environmental and commercial aspects, and promotes the contribution of fisheries to food security and food quality. The Code also seeks to promote and facilitate structural adjustment in the fisheries sector so that fisheries are utilized in a long-term sustainable and responsible manner for the benefit of present and future generations.90 The Code is global in scope and is directed towards a number of stakeholders, including regional fisheries management organizations and arrangements.91

134. The Code of Conduct is complemented by four international plans of action: the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing; the International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries; the International Plan of Action for the Conservation and Management of Sharks; and the International Plan of Action for the Management of Fishing Capacity. The international plans of action are non-binding instruments that are elaborated within the framework of the Code of Conduct and apply to all States, entities and fisheries.

135. The Kyoto Declaration and Plan of Action was adopted by the International Conference on the Sustainable Contribution of Fisheries to Food Security in 1995. It recognized the important role played by fisheries and aquaculture in providing food security, both through food supplies and through economic and social well-being.92 The Declaration called for actions to be taken in conserving and managing fishery resources and fisheries including, inter alia, actions for the effective implementation of the FAO Code of Conduct for Responsible Fisheries, strengthening scientific research for sustainable development of fisheries and aquaculture, assessing stock productivity and adjusting fishing capacity to a level commensurate with long-term stock productivity and increasing the available supply of fish and fishery products for human consumption.93

136. The FAO Strategy for Improving Information on Status and Trends of Capture Fisheries was adopted in 2003 as a non-binding instrument.94 Its main objective was to provide a practical framework, strategy and plan for the improvement of knowledge and understanding of fishery status and trends as a basis for fisheries policymaking and management for the conservation and sustainable use of fishery resources within ecosystems. The Strategy provides guiding principles for implementation arrangements and sets forth objectives and required actions defining the roles of different stakeholders, with the primary emphasis on the need for capacity-building in developing countries. The “FishCode-STF Project” was formulated under the FAO FishCode Programme to support the implementation of the Strategy globally.95

137. In 2009, the FAO Committee on Fisheries approved the Agreement on Port State Measures to Prevent, Detent and Eliminate Illegal, Unreported and Unregulated
importance of international and regional cooperation and coordination concerning unregulated fishing through the implementation of effective port State measures to ensure the long-term conservation and sustainable use of living marine resources and marine ecosystems.

138. In order to prevent illegally caught fish from entering the international market, the Agreement sets forth measures to be taken by port States in respect of foreign fishing vessels. At its sixty-fifth session, the General Assembly encouraged States to consider ratifying, accepting, approving or acceding to the Agreement on Port State Measures with a view to its early entry into force. 97

139. The current FAO plan of action lays the foundation for an enhanced results-based approach to programme planning, implementation and reporting in the Organization. Principles and major elements of the approach include: (a) reduction of the absolute number of people suffering from hunger; (b) elimination of poverty and the driving forward of economic and social progress for all; and (c) sustainable management and utilization of natural resources for the benefit of present and future generations. 98

140. Recent developments at FAO to achieve a comprehensive normative framework for sustainable fisheries have included the adoption of the International Guidelines for the Management of Deep-sea Fisheries in the High Seas in 2008 and adoption of the International Guidelines on Bycatch Management and Reduction of Discards in 2011. The former Guidelines were adopted to assist States and regional fisheries management organizations and arrangements in sustainably managing deep-sea fisheries in the high seas and provide advice on data and reporting, enforcement and compliance, management measures, conservation-related aspects, criteria for identification of vulnerable marine ecosystems and impact assessments. 99 A global database of information relevant to vulnerable marine ecosystems is also being developed and user-friendly species identification guides will be published to assist in improving information on deep-sea species. 100 A technical consultation will be held in May 2011 to consider the development of a new instrument on flag State performance. Approval has also been given to the development of a new international instrument on small-scale fisheries that would focus on the needs of developing countries. Efforts continue on the development and implementation of a global record of fishing vessels, refrigerated transport vessels and supply vessels.

Activities of other intergovernmental organizations at the international level

141. A number of other intergovernmental organizations and entities have actively contributed to the conservation and sustainable use of marine living resources since the United Nations Conference on Environment and Development, including the Convention on Biological Diversity, the Convention on International Trade in Endangered Species, the Organization for Economic Cooperation and Development (OECD), UNEP, UNESCO and WTO. In that regard, Agenda 21 recognized the importance of international and regional cooperation and coordination concerning the conservation and sustainable use of marine living resources. 101 It also recognized the importance of actions to strengthen cooperation and coordination between the numerous organizations, both within and outside the United Nations system, with competence in marine issues. 102

142. The Conference of the Parties to the Convention on Biological Diversity, by decision X/2 of its tenth meeting, adopted a Strategic Plan for Biodiversity 2011-2020, including a target for 2020 by which all fish and invertebrate stocks and aquatic plants would be managed and harvested sustainably, legally and applying ecosystem-based approaches. For those purposes, the Convention on Biological Diversity has initiated cooperation with FAO, UNEP and other relevant intergovernmental and non-governmental organizations and entities in assessing the impacts of destructive fishing practices, unsustainable fishing and illegal, unregulated and unreported fishing on marine biodiversity and habitats. 103 The Conference of the Parties, by its decision X/29, also decided to continue its review on the impacts of unsustainable fishing, such as destructive fishing practices, overfishing, and illegal, unregulated and unreported fishing, on marine and coastal biodiversity and habitats.

143. By its resolution 14.2, the fourteenth Conference of the Parties to the Convention on International Trade in Endangered Species adopted a Strategic Vision for 2008-2013, which took into account the Millennium Development Goals and the outcomes of the World Summit to ensure that the Convention policy developments were mutually supportive of international environmental priorities. The secretariat of the Convention also continued to provide support for research as well as analysis of biological status and population distribution of specific species currently in trade or being considered for trade, and the identification of species that might qualify for and benefit from inclusion in the Convention’s appendices (see also para. 106). 104

144. In 2009, taking into account the World Summit commitment to maintain or restore depleted fish stocks to levels that can produce maximum sustainable yield levels by 2015, OECD decided to implement a project on the economics of rebuilding fisheries that focused on the key economic and institutional aspects of the rebuilding process. The major outcome of the project will be to provide practical and evidence-based advice on what policymakers need to do to ensure that stock rebuilding programmes succeed and have an economically positive contribution over the longer term. 105

145. IOC has worked to strengthen regional cooperation and coordination between regional organizations and programmes, UNEP Regional Seas Programmes, regional fisheries management organizations and arrangements and other regional science health and development organizations. It launched a project on the sustainable management of the shared marine resources of the Caribbean Large Marine Ecosystems. 106

97 Resolution 65/38, para. 50.
98 FAO contribution; see also FAO document COFI/2011/9.
99 FAO, The State of World Fisheries and Aquaculture 2010 (Rome, 2010), see also A/65/69/Add.2, paras. 175-177.
100 FAO contribution.
Developments at the regional level

146. Agenda 21 recognized the need for States to ensure cooperation and coordination between and within subregional, regional and global intergovernmental fisheries bodies. It also encouraged States to cooperate to establish such organizations where they did not exist. 107

147. Since the United Nations Conference on Environment and Development and the adoption of the Agreement, greater attention has been given to the development of a coherent legal framework for the conservation and management of marine living resources on the high seas. In that regard, the Agreement, by its articles 8 and 10, identified regional fisheries management organizations and arrangements as the main mechanism for the adoption of conservation and management measures and set out an extensive list of functions to be performed by those organizations and arrangements, emphasizing their management role.

148. It is recognized, however, that there is a need to improve the functioning of those organizations and arrangements and thereby improve the governance of high seas fisheries. Many regional fishery management organizations and arrangements are not mandated to impose legally binding obligations and instead serve as scientific advisory bodies. 108 Some regional fisheries management organizations, despite having a management mandate, only have competence over specific species or are focused on a specific geographical area.

149. Recent efforts have been made to modernize the mandates of those organizations and arrangements, undertake performance reviews, establish new regional fisheries management organizations and arrangements and strengthen integration, coordination and cooperation, including with regional seas arrangements and other relevant organizations. 109 Regional fisheries management organizations and arrangements with the competence to regulate bottom fisheries have also taken actions to give effect to General Assembly resolutions 59/25 and 61/105 to address the impacts of such fisheries on vulnerable marine ecosystems. 110

150. In recent developments, the International Commission for the Conservation of Atlantic Tunas reported that several commercially important tuna stocks were subject to recovery and rebuilding plans, with the allocation of fishing possibilities taking into account scientific advice, as well as the legitimate rights of developing States to develop their fisheries in the context of maintaining the stocks at maximum sustainable yield. In the future, the International Commission will consider the possibility of formalizing the implementation of the precautionary approach into the decision-making process. 111 The Commission for the Conservation of Antarctic Marine Living Resources has developed a three-year programme to support capacity-building and address issues associated with burden-sharing relating to science processes in the Commission. 112 The Inter-American Tropical Tuna Commission has established closed areas and seasons that apply to all fishing vessels for the purse seine fishery and it has prohibited trans-shipment at sea by purse seine vessels. 113

3. Control of marine pollution

151. The United Nations Conference on Environment and Development recognized that the degradation of the marine environment could result from a wide range of land-based sources as well as sea-based activities, such as maritime transport, dumping at sea and oil and gas exploration and production. Agenda 21 114 and the Johannesburg Plan of Implementation 115 thus identified a number of challenges and set forth objectives, activities and means of implementation to protect the marine environment from such pollution.

152. In particular, Agenda 21 recommended that States apply preventive, precautionary and anticipatory approaches, ensure prior assessment of activities, integrate protection of the marine environment into relevant policies, develop economic incentives and other means consistent with the internalization of environmental costs and improve the living standards of coastal populations. 116 It was also agreed that the provision of additional financial resources and access to cleaner technologies and relevant research would be necessary to support actions by developing countries.

Pollution from land-based sources

153. Since the adoption of Agenda 21, the international community has developed legal and policy instruments and undertaken numerous activities at the global, regional and national levels to address marine pollution from land-based sources. Although some progress has been made, pollution from an ever-growing number of land-based activities continues to negatively impact the marine environment. Major categories of pollutants from land-based sources include sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, nutrients, sediment mobilization, and marine litter. 117

154. It is estimated that up to 80 per cent of marine pollution comes from land-based sources, such as industry, agriculture, urban development, mining, military activities, tourism and construction work. Although those activities are important contributors to national economic development, if not properly planned and managed, they can have profoundly negative consequences on the marine environment and, therefore, sustainable development.

155. Pollution from land-based sources primarily affects coastal areas, which are considered among the most productive marine areas. In particular, pollution from such sources impacts food security and poverty alleviation, public health, 118

107 Agenda 21, chap. 17, paras. 17.58-17.61.
108 See A/60/99, para. 7 and A/CONF.210/2010/7, annex. See also, E. J. Molenaar, “New areas and gaps — How to address them” (2005), para. 3.
110 A/61/154 and A/64/305.
111 International Commission for the Conservation of Atlantic Tunas contribution.
112 Commission for the Conservation of Antarctic Marine Living Resources contribution.
113 Inter-American Tropical Tuna Commission contribution.
114 Agenda 21, chap. 17, paras. 17.18-17.43.
115 Johannesburg Plan of Implementation (see note 9 above), chap. IV, paras. 33-35.
116 Agenda 21, chap. 17, para. 17.22.
ecosystems and ecosystem health and economic and social benefits and uses, including cultural values.\(^{118}\)

156. At the global level, the legal regime, which largely predates Agenda 21, includes the general provisions for the protection of the marine environment from land-based sources of pollution set forth in Part XII of the Convention and a number of international instruments concluded to regulate specific types or sources of pollution, including the 1971 Ramsar Convention and the 2001 Stockholm Convention on Persistent Organic Pollutants.\(^{119}\) States are currently negotiating a global legally binding instrument on mercury pursuant to a decision of the UNEP Governing Council in 2009 (see also para. 224 below).\(^{120}\)

157. At the regional level, a number of instruments addressing pollution from land-based sources have been adopted since 1992, particularly in the context of the Regional Seas conventions. Examples include the 1995 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities and the 2010 Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities. The 1999 Protocol concerning Pollution from Land-Based Sources and Activities to the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region also entered into force in July 2010. In addition, a number of other regional instruments address land-based sources of pollution in a more general manner.

158. The international legal framework is complemented by a strong policy framework based on non-binding global instruments that call for implementing actions at global, regional and national levels.

159. The 1985 Montreal Guidelines for the Protection of the Marine Environment from Land-Based Sources provided guidance on the development of appropriate bilateral, regional and multilateral agreements and national legislation for the protection of the marine environment against pollution from land-based sources. In paragraph 17.2 of Agenda 21, the UNEP Governing Council was invited to convene, as soon as practicable, an intergovernmental meeting on protection of the marine environment from land-based activities, building on these Guidelines.

160. Subsequently, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities was adopted. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities is a source of conceptual and practical guidance to be drawn on by national and/or regional authorities in devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities. It sets forth actions to be taken at all levels to address land-based sources of pollution. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities also indicates recommended approaches for dealing with nine specific types of pollution: sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, nutrients, sediment mobilization, litter and physical alterations and destruction of habitats.\(^{121}\)

161. As secretariat for the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, the UNEP’s Marine and Coastal Ecosystem Branch assists States and intergovernmental organizations in the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, inter alia, through the preparation of guidance material, assessments and manuals as well as the provision of technical assistance and capacity-building. It works closely with the UNEP Regional Seas Office as well as the Regional Seas Programmes, which have spearheaded implementation efforts at the regional level.

162. The Branch also supports countries to develop and implement programmes of action at the national level by providing technical assistance. Those programmes of action should be comprehensive, continuing and adaptive, addressing cross-sectoral issues such as legislation, policies and financing, while implementing concrete activities to protect the marine environment.\(^{122}\) Approximately 70 countries have developed, or are in the process of developing, a national plan for the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.\(^{123}\)

163. Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities was reviewed in 2001 and 2006 and will be reviewed again in November 2011.\(^{124}\) The second intergovernmental review of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, as it gave greater emphasis to national and local level action, supported by calls for creating sustainable financial mechanisms, economic valuation of goods and services, participation by local stakeholders, and integrated approaches to management, in particular, linking freshwater and coastal management.\(^{125}\) In response to paragraph 33 of the World Summit Political Declaration, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities has narrowed its scope to give greater emphasis to municipal wastewater, the physical alteration and destruction of habitats, nutrients and marine litter.\(^{126}\)

164. Since 2006, the Branch and its partners, including UNDP, GEF and the regional seas programmes, have focused efforts on addressing the priority areas identified during the second Intergovernmental Review, as well as continuing efforts to promote mainstreaming of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities into national development agendas and promoting integrated coastal and river basin management. The Branch aims to ensure that efforts by national authorities to address land-based activities are well integrated into national development processes, including those supported by

\(^{118}\) GESAMP, Protecting the oceans from land-based activities (2001), pp. 9-16.

\(^{119}\) See also UNEP, Protecting coastal and marine environments from land-based activities: A guide for national action (2006), at pp. 8, 9, 14.

\(^{120}\) See www.unep.org/hazardoussubstances/Mercury/Negotiations/tabid/3320/Default.aspx.

\(^{121}\) UNEP contribution; see also UNEP(OCA)/LBA/1G.2/7.

\(^{122}\) UNEP contribution.

\(^{123}\) A/62/66/Add.1, para. 173.

\(^{124}\) See www.gpa.unep.org/index.php?option=com_content&view=article&id=58&Itemid=53.

\(^{125}\) See A/62-86, para. 268-272.

the international donor community, United Nations Development Assistance Frameworks, and Poverty Reduction Strategies.

165. Some recent initiatives have featured in reports of the Secretary-General on oceans and law of the sea, including programmes to assess and address marine litter, the establishment of the Global Partnership on Nutrient Management and programmes aimed at improving wastewater management.\(^ {127}\)

**Pollution from ships**

166. International shipping is critical to sustainable development and underpins economic and social growth in many countries. More than 80 per cent of international trade in goods is carried by sea and an even higher percentage of developing-country trade is carried in ships. According to recent reports, however, many least developed countries remain isolated from major or frequent shipping routes.\(^ {128}\)

167. Impacts to marine environment stemming from shipping activities continue, particularly from oil pollution, air pollution and greenhouse gas emissions, chemical pollution and invasive alien species.

168. Numerous international legal and policy instruments have been developed since the United Nations Conference on Environment and Development to prevent, reduce and control pollution of the marine environment from ships.\(^ {129}\) As provided in article 194 of the Convention, those measures relate to the design, construction, equipment, operation and manning of vessels, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and preventing accidents and dealing with emergencies.\(^ {130}\)

169. The majority of these instruments have been developed by IMO, through the Maritime Safety Committee and the Marine Environment Protection Committee, but relevant instruments have also been developed by ILO, IHO and IAEA. A number of those instruments have yet to enter into force. Many of the policy instruments, including guidelines, standards and codes, have been developed with the important participation of industry and insurance associations.

170. A number of important instruments has been adopted by IMO since the United Nations Conference on Environment and Development in regard to safety of navigation and the prevention of marine pollution,\(^ {131}\) as well as in regard to liability and compensation for pollution to the marine environment.\(^ {132}\) IMO has also adopted international instruments on the safety of fishing vessels, but these instruments have yet to enter into force.\(^ {133}\)

171. In regard to the transport of dangerous goods, relevant international instruments include the International Maritime Dangerous Goods Code and the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships, which are now both mandatory under the International Convention for the Safety of Life at Sea, as well as the IAEA Regulations for the Safe Transport of Radioactive Material.

172. Global conventions adopted by ILO to regulate labour standards and the safe operation of vessels include the Maritime Labour Convention, 2006 and the Work in Fishing Convention, 2007 (No. 188). Legal instruments to prevent pollution of the marine environment from shipping have also been adopted at the regional level, in particular in the context of the UNEP Regional Seas Programme (see para. 73).

173. In order to regulate pollution from ships in particularly sensitive sea areas, special areas and emission control areas have been established. Particularly sensitive sea areas must have certain significant ecological, socio-economic or scientific attributes and must be vulnerable to damage by international shipping activities.\(^ {134}\) There must also be at least one associated protective measure with an identified legal basis that can be adopted by IMO to prevent, reduce, or eliminate risks from these activities.\(^ {135}\)

174. Under the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), particularly sensitive areas must also satisfy specific criteria relating to oceanographical and ecological conditions and to sea traffic. When approved by IMO, special areas are provided through mandatory regulations with a higher level of protection from operational discharges than other areas of the sea.

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\(^ {127}\) A/63/63/Add.1, paras. 157, 158 and 167-169; A/64/66/Add.1, paras. 226-231 and 387.


\(^ {129}\) For example, since the adoption of the International Convention for the Control and Management of Ships' Ballast Water and Sediments in 2004, the Maritime Environment Protection Committee has produced and adopted fourteen sets of guidelines to assist in the implementation of this Convention. It has also adopted a set of guidelines for ballast water exchange in the Antarctic treaty area.

\(^ {130}\) See A/63/63, paras. 164-170, and A/57/57, paras. 277-346 and 373-401.

\(^ {131}\) Important IMO instruments include: (a) the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Protocol); (b) the Protocol of 1997 (ANNEX VI — Regulations for the Prevention of Air Pollution from Ships) to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto; (c) Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, 2000; (d) International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001; (e) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers was also amended in 1995 and 2010.


\(^ {134}\) Revised guidelines for the identification and designation of Particularly Sensitive Sea Areas (IMO resolution, A/982(24)).

\(^ {135}\) IMO contribution.
175. In 1997, annex VI was added to MARPOL 73/78 on regulations for the prevention of air pollution from ships, which sought to minimize airborne emissions from ships, including sulphur oxides and nitrogen oxides, and their contribution to pollution. Following its entry into force in 2005, a revised annex VI was adopted in 2008 with the aim of significantly strengthening the applicable emission limits. The revised annex contained a progressive reduction in emissions from ships and provided for the designation of emission control areas. The revised annex VI and the associated nitrogen oxides Technical Code 2008 entered into force on 1 July 2010.136

176. IMO coordinates and manages environmental programmes and delivers national and regional activities connected to the protection of the marine environment through its Integrated Technical Cooperation Programme.137 The Programme was created to assist countries in developing human resources and institutional capacities for uniform and effective compliance with the IMO regulatory framework and helps countries ensure safe, secure and effective shipping services and protect their waters and coasts from environmental degradation caused by ships and other maritime-related activities.

177. In 2007, the IMO Assembly adopted resolution A.1006(25) on the linkage between the Integrated Technical Cooperation Programme and the Millennium Development Goals which, inter alia, invited Member States and donor organizations to recognize the importance of building maritime capacity in achieving the Millennium Development Goals and to ensure that consideration was given to the inclusion of the maritime sector in official development assistance programmes. It also requested IMO to give high priority to those activities that not only promote the early ratification and effective implementation of IMO global instruments, but also contribute to the attainment of the Millennium Development Goals, taking into account the special needs of small island developing States and the least developed countries, as well as the particular maritime transport needs of Africa.138

Other sources of pollution

178. In addition to shipping, degradation of the marine environment can result from other sea-based activities, such as dumping, oil and gas exploration and development, and deep seabed mining. In regard to dumping, Agenda 21, by its paragraph 17.30.B, recommended that States support wider ratification, implementation and participation in relevant Conventions on dumping at sea and encouraged the Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention) to take appropriate steps to stop ocean dumping and incineration of hazardous substances. By its paragraph 17.30.C, Agenda 21 also addressed offshore oil and gas platforms and recommended that States assess existing regulatory measures to address discharges, emissions and safety and to assess the need for additional measures.

179. The London Protocol was adopted in 1996 in order to modernize and eventually replace the London Convention. It entered into force in 2006 and represented a major change of approach to the regulation of the sea as a depository for waste materials by stressing the precautionary approach.

180. Under the Protocol, all dumping is prohibited, except for possibly acceptable wastes on a so-called “reverse list”. Appropriate preventative measures are to be taken when wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects. There are currently 39 Parties to the Protocol.139

181. The governing bodies of the London Convention and the London Protocol have adopted a number of guidelines for assessing the impact of human activities on the marine environment and address all waste streams that may be considered for dumping at sea. Recent attention has focused on the impact on the marine environment of iron fertilization (see para. 202 below).140

182. In the wake of the Deepwater Horizon and Montara incidents, international attention has focused on the need to prevent pollution of the marine environment from offshore oil and gas exploration and development. IMO has already developed a comprehensive regime covering the prevention of oil pollution from ships, including in regard to liability and compensation (see paras. 166-177 below), however, the relevant instruments do not currently cover pollution damage caused by offshore exploration and exploitation activities.

183. At the 2010 meeting of the Legal Committee of the IMO, a proposal was made to add a new work programme item to address liability and compensation issues connected with transboundary oil pollution damage resulting from offshore oil exploration and exploitation.141 The IMO Strategic Plan did not cover pollution caused by offshore oil exploration and exploitation activities.142 Accordingly, the Legal Committee approved a proposal to recommend that the Council, and through it, the Assembly, revise the Strategic Plan.

184. The International Seabed Authority has been developing rules, regulations and procedures concerning the prospecting, exploration and exploitation of marine minerals in the Area which, inter alia, aim at ensuring an environmentally sustainable development of seabed mineral resources therein.143 To date, these include the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, adopted by the Authority on 13 July 2000, and the Regulations on Prospecting and Exploration for Polymetallic Sulphides, adopted by the Assembly of the Authority on 7 May 2010. At its seventeenth session, in 2011, the Authority will discuss the Draft Regulations on Prospecting and Exploration for Cobalt-Rich Crusts. The Authority has also organized scientific and technical workshops on the resources of the deep seabed and the marine environment to gather the scientific knowledge necessary to sustainably manage the resources of the Area.

136 A/65/69/Add.2, paras. 248-250.
137 IMO contribution.
138 A/66/70/Add.1.
139 See www.imo.org/About/Conventions/StatusOfConventions/Documents/Status%20-%202011.pdf.
140 IMO contribution.
142 Resolution A.1012(26).
Recent developments

185. At its tenth meeting, held in 2010, the Conference of the Parties to the Convention on Biological Diversity adopted a new strategic plan for biodiversity with a number of targets relevant to the prevention of pollution of the marine environment. The target of the plan was to bring pollution, including from excess nutrients, to levels that were not detrimental to ecosystem function and biodiversity by 2020. In addition, invasive alien species and pathways would be identified and prioritized. Measures would be in place to manage pathways to prevent their introduction and establishment (decision X/2, annex).

186. In regard to invasive alien species, IOC reported that it was working with the International Council for the Exploration of the Sea and IMO to develop ballast water sampling guidelines, a code of best practice for hull fouling and a code of best practices for port sampling.144

187. IHO highlighted the importance of hydrographic data, information and products such as nautical charts to maritime trade and sustainable development, including in the construction and maintenance of ports, harbours and other maritime facilities, marine tourism, fishery and aquaculture industries and coastal zone management. It supported and contributed to the establishment of hydrographic offices, especially for developing countries and small island developing States, including in the provision of necessary technology and products.145

4. Climate change

188. Since the adoption of the outcomes at the Conference on Environment and Development and the World Summit, the international community has continued to debate the implications of climate change for sustainable development. Many of those discussions have taken place in the context of the United Nations Framework Convention on Climate Change (the Framework Convention).146 At its meeting in Cancun in 2010, the Conference of the Parties to the Framework Convention stressed the challenge that developing countries in particular faced in dealing with climate change while striving to attain sustainable development. The Johannesburg Plan of Implementation, in its chapter IV, paragraph 38, specifically called for actions at all levels to, inter alia, meet the commitments and obligations under the Framework Convention and work cooperatively towards achieving its objectives.147

189. The international community has come to recognize the important role of the oceans in the climate system and the impact that climate and atmospheric changes can have on marine biodiversity and ecosystems and, consequently, sustainable development. It has been estimated, for example, that 55 per cent of atmospheric carbon captured by living organisms is captured by marine vegetated habitats, including mangroves, salt marshes, seagrasses and seaweed.148 Certain practices relating to terrestrial and marine resources and land use can decrease greenhouse gas sinks and increase atmospheric emissions and loss of biological diversity can reduce the resilience of ecosystems to climatic variations.149

190. The following section highlights major actions taken to increase understanding of the impacts of climate change on the oceans. It also provides an overview of actions taken to mitigate such impacts and adapt to the projected impacts of climate change on the oceans.

Understanding the impacts of climate change on the oceans

191. Significant efforts have been made since the adoption of Agenda 21 to improve the understanding of processes that influence and are influenced by the Earth’s atmosphere, including economic and social processes, build capacity, enhance international cooperation and improve understanding of the economic and social consequences of atmospheric changes and of mitigation and response measures addressing such changes.150 Important in that regard has been the development of research to better understand the impacts of climate change on the oceans, including rising sea levels, melting Arctic sea ice, ocean acidification, loss of marine biodiversity, extreme weather events and shifts in distribution of marine species.151

192. The work of the Intergovernmental Panel on Climate Change has been particularly significant in the preparation of comprehensive assessments of scientific, technical and socio-economic information relevant for the understanding of climate change and its potential impacts, as well as options for mitigation and adaptation.152 The Fifth Assessment Report of the Panel, which is scheduled to be completed in 2014, will put greater emphasis on assessing the socio-economic aspects of climate change and implications for sustainable development, risk management and the framing of a response through both adaptation and mitigation.153

193. In regard to fisheries, the International Council for the Exploration of the Sea indicated that an increase in sea temperature in the medium and long term could lead to changes in the migrations of major fish stocks in the North East Atlantic Fisheries Commission Convention area. Changes in migration or spawning behaviour could affect catch rates, or cause populations to shift from areas where spatial restrictions are in place or across maritime boundaries with different quotas.154

194. Particular concerns have been raised over the impacts of ocean acidification on the marine environment and marine biodiversity,155 including by altering species composition, disrupting marine food webs and ecosystems and potentially damaging fishing, tourism and other human activities connected to the seas. Further

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144 IOC contribution.
145 IHO contribution.
147 See also Agenda 21, chap. 9, para. 9.2.
149 See also UNEP, Emerging Issues: Environmental Consequences of Ocean Acidification: A Threat to
Mitigating the impact of climate change from ocean-related activities

198. The following section highlights significant actions taken by IMO to reduce greenhouse gas emissions from ships and regulate ocean fertilization and carbon sequestration.

199. In addition to the development of comprehensive studies into actions taken by IMO to reduce greenhouse gas emissions from ships, the system will include emerging essential climate variables on ocean chemistry and ecosystems, which will be relevant in tracking the impacts of climate change and acidification on ocean ecosystems.

200. The following section provides a summary of the key impacts of ocean fertilization activities, including the export of carbon dioxide streams for the purpose of storage in transboundary sub-sea geological formations, and the negative impact on ocean chemistry and ecosystems in climate change negotiations.

201. In the context of the Framework Convention, the Subsidiary Body for Scientific and Technical Advice receives periodic updates from IMO on developments in reducing greenhouse gas emissions from international shipping, including a proposed levy on all carbon dioxide emissions from international shipping, or from ships not meeting energy efficiency requirements.

202. The United Nations Conference on Environment and Development had recommended promoting research to better understand the impacts of ocean acidification on marine ecosystems, develop linkages between economists and scientists to evaluate the socio-economic impacts, improve communication between policymakers and researchers and consider the effect of ocean fertilization activities other than legitimate scientific research (see para. 157).

203. Amendments to the London Protocol entered into force in 2007 to allow the capture and storage of carbon dioxide in sub-sea geological formations for long-term isolation from the atmosphere. In 2009, the Contracting Parties to allow the expert of carbon dioxide streams for the purpose of storage in transboundary sub-sea geological formations, which has yet to enter into force. A review is currently taking place to develop a global mechanism for ocean fertilization activities.

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205. The future

206. The United Nations Conference on Environment and Development had recognized the importance of ocean fertilization as one of the most important and urgent issues in relation to the protection of living marine resources and the marine environment. It highlighted, in particular, the need for a long-term cooperative research commitment to provide the data required for global climate models and reduce uncertainty.

207. The Conference of the Parties to the Convention on Biological Diversity, in its decision X/13, recognized that ocean acidification met the criteria for consideration as a new and emerging issue and requested the Subsidiary Body for Scientific and Technical Advice to consider the impacts of ocean acidification on ocean ecosystems.

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currently being conducted of the 2007 Specific Guidelines for Assessment of Carbon Dioxide Streams for Disposal into Sub-seabed Geological Formations, in the light of the amendments to article 6, with a view to its completion in 2012.\footnote{IMO documents LC 29/17, annex 4, and LC 32/15.}

**Adapting to climate change**

204. Significant efforts have been made by the international community, in particular by coastal communities, to adapt to the current and projected impacts of climate change on the oceans.\footnote{A/65/69/Add.2, paras. 386-392 and A/64/66/Add.1, paras. 358-361.} In the light of Agenda 21, many of these activities have also focused on the importance of marine and coastal biodiversity and the need for ecosystem-based adaptations strategies.

205. At its most recent meeting, the 2010 Conference of the Parties to the Framework Convention in Cancun agreed that enhanced international cooperation and enhanced action on adaptation were urgently required to support and enable adaptation implementation to reduce vulnerability and build resilience in developing countries, taking into consideration, inter alia, vulnerable ecosystems. In addition, at the outcome of the Ad Hoc Working Group on Long-term Cooperative Action, all Parties were invited to enhance action on adaptation under the Cancun Adaptation Framework. The need to strengthen international cooperation and expertise was also recognized.\footnote{Agenda 21, chap. 9, paras. 9.19-19.20. See also Johannesburg Plan of Implementation (see note 9 above), chap. IV, para. 38.}

206. The new strategic plan for biodiversity adopted by the Conference of the Parties to the Convention on Biological Diversity in 2010 recognized that protection of biodiversity would help slow climate change by enabling ecosystems to store and absorb more carbon and help people adapt to climate change by adding resilience to ecosystems and making them less vulnerable. In terms of specific actions, it was decided that, by 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks would be enhanced through conservation and restoration, including the restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation.\footnote{Contribution of the secretariat of the United Nations Framework Convention on Climate Change.}

207. FAO recently initiated the development of the Global Partnership on Climate, Fisheries and Aquaculture, a voluntary partnership comprising 20 international organizations and sector bodies with a focus on climate change interactions with global waters and living resources and their resulting social and economic consequences. Issues relating to climate change impacts, adaptation and mitigation in the context of fisheries and aquaculture were also considered by the twenty-ninth session of the FAO Committee on Fisheries in 2011.

5. **Marine science and transfer of marine technology**

208. Marine science and its supporting technologies, through improved knowledge and their application to management and decision-making, can make a major contribution to eliminating poverty, ensuring food security, supporting human economic activity, conserving the world’s marine environment and helping predict and mitigate the effects of and responses to natural events and disasters. Marine science can also assist in generally promoting the use of the oceans and their resources to achieve sustainable development.

209. Agenda 21 recommended States to consider supporting the role of international organizations in the collection, analysis and distribution of data and information from the oceans and all seas. The Johannesburg Plan of Implementation underlined the importance of building capacity in marine science. It also stressed the need to increase scientific and technical collaboration, including the appropriate transfer of marine science, technologies and techniques for the conservation and management of living and non-living marine resources. The Mauritius Strategy of Implementation (see sect. III, D below) called upon the international community to provide technical and financial support for IOC’s marine science programmes that are of particular relevance to small island developing States.

210. Marine science and technology is a cross-cutting issue that has consistently been on the agenda of the meetings of the Informal Consultative Process and the General Assembly, which continues to stress the importance of increasing the scientific understanding of the marine environment, particularly the deep sea, and its vulnerable marine ecosystems. International support should better coordinate research, foster collaboration and dialogue, build partnerships and improve international governance, including reform of the Bretton Woods Institutions.\footnote{The World Bank and the International Monetary Fund.}

211. While a number of organizations are involved in carrying out marine scientific research and related activities under their respective mandates, IOC is recognized as the competent international organization with regard to marine scientific research in the Convention. It plays an important role in the implementation of Agenda 21 and the Johannesburg Plan of Implementation, as several of the provisions of the Plan address it directly. IOC has emerged as the international organization that coordinates marine scientific activities, ocean services and related capacity-building (see paras. 212-221 below). IOC contributes to the implementation of the Convention and has programmes in ocean science and technology.

**Mechanisms of cooperation and coordination in marine science**

Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization

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**Advisory Body of Experts on the Law of the Sea**

212. To respond to the requirements deriving from the Convention relevant to research, transfer of marine technology and capacity-building, the IOC Assembly
established the Advisory Body of Experts on the Law of the Sea in 1999 to provide advice upon request to the governing bodies of IOC and to the Executive Secretary on the implementation of IOC responsibilities under the Convention. The Advisory Body of Experts, working in close cooperation with the Division for Ocean Affairs and the Law of the Sea has held 10 meetings and concluded work on three documents: IOC Criteria and Guidelines on Transfer of Marine Technology; Procedure for the Application of article 247 of the United Nations Convention on the Law of the Sea by the IOC; and Guidelines for the implementation of resolution XX-6 of the IOC Assembly regarding the deployment of profiling floats in the high seas within the framework of the Argo programme. At the forty-third meeting of the IOC Executive Council in 2010, the Advisory Body of Experts was requested to continue work on the questionnaire No. 3 on “The practices of Member States in the field of marine scientific research and transfer of marine technology” within the framework of the Convention.

Global ocean observation systems

213. Agenda 21 called for the establishment of a global ocean observation system that will enable effective management of the marine environment and sustainable utilization of its natural resources. IOC leads a partnership with WMO, UNEP and the International Council for Science to coordinate the implementation of the System, which is a permanent system for ocean observation and is built, maintained and upgraded with contributions from member States. The System consists of (a) an open ocean module with a focus on observations for climate services and science; and (b) a coastal module that focus on a broader suite of observations including socio-economic data. The System comprises remote sensing from satellites; coastal instruments including tide gauges; buoys, drifters and other platforms; ships of opportunity (including commercial ferries); and long time series records of variability. It produces data and information for users. Much of its implementation relies on the technical guidance provided by the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology. Sixty-two per cent of the foreseen observing network for the open ocean module of the System is in place (up from about 30 per cent at the Earth Summit). Components for drifting buoys and free-drifting profiling floats have met their initial design goals, though sustaining those systems remains a challenge. Considerable progress has also been seen for the global array of tide gauges largely driven by the increased focus on tsunami and other sea level hazard monitoring.

214. In its resolution XXIII-1, the IOC Assembly recognized that full implementation of the System requires the sustained operation of in situ and space-based systems that are being considered as an integral part of the global earth observations system of systems. The System faces the challenge of broadening the observation network from a limited set of physical observations to one that embraces biological and chemical variables to underpin assessment of the state of the oceans beyond climate, including, for example, carbon uptake, acidification, ecosystem change and biodiversity.

215. IOC reported that investments in the System over the past decade have stagnated. Capacity development will be critical and there is a need for the international donor community including GEF to earmark funding for sustained coastal ocean observation and science activities.\textsuperscript{181}

216. Establishment of a formal convention for the collection and exchange of essential ocean observations could further the development of the System.\textsuperscript{182}

Harmful algal blooms

217. Following-up from the United Nations Conference on Environment and Development, IOC formed the Intergovernmental Panel on Harmful Algal Blooms in March 1991 to meet the scientific, managerial, and resource needs for implementation of a global harmful algal bloom programme. The Panel has met over ten times and continues to work on the development and implementation of a harmful algal bloom programme to foster the effective management of and scientific research on harmful algal blooms in order to understand their causes, predict their occurrences and mitigate their effects. In April 2011, the Panel meeting focused on capacity-building; the effects of harmful algae on human health, including the long-term effects of low-level exposure which are poorly understood; harmful algal events, coastal zone management and linkages with coastal eutrophication; and the effects of climate and global change on the occurrence and impact of blooms.

218. The Panel has a team acting as a focal and coordination point regarding interaction with the System, the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology, and the IOC Ocean-Related Hazards Early Warning System with respect to harmful algal bloom observations, forecasting and warning systems. With regard to data collection and sharing, the Panel is also working with International Oceanographic Data and Information Exchange on the development of a harmful algae information system designed to compile data on harmful events, the biogeography of harmful species and current monitoring and management systems worldwide, and to be a reference point for the usage of names of causative species.

Early warning systems

219. The reduction of risk from numerous coastal hazards, including tsunamis, storm surges or outbreaks of harmful algal blooms, is made possible through the installation and use of early warning systems to alert local populations of impending events. The Indian Ocean tsunami of 2004 and the recent earthquake in Japan particularly highlight to the international community the devastating effects of tsunamis and the need for early warning systems to prevent hazardous natural events from turning into humanitarian disasters. However, funding for tsunami early warning systems has shrunk, although tsunamis are increasingly being addressed as part of a multi-hazard approach.

220. Under the main leadership of IOC, a framework for an overall global system and warning systems for tsunamis and other coastal hazards have been established for the Indian Ocean, the Caribbean and adjacent seas, the North-eastern Atlantic, the Mediterranean and connected seas. The global drifting buoy array, Argo profiling floats and a substantial number of sea level stations have been upgraded to real time data delivery in support of tsunami warning systems. However, it has been

\textsuperscript{181} IOC contribution.

\textsuperscript{182} IOC contribution.
noted that sampling needs also to be increased to enhance early warning systems. IOC improves coastal mapping activities within States through capacity-building activities and by assisting national disaster agencies in developing targeted maps and services, including inundation maps and coastal ecosystem mapping.

The International Oceanographic Data and Information Exchange

221. The Exchange is an IOC programme. Its objectives are to (a) facilitate and promote the exchange of all marine data and information including metadata, products and information in real time, near real time and delayed mode; (b) ensure the long-term archiving, management and services of all marine data and information; (c) promote the use of international standards and develop or help in the development of standards and methods for the global exchange of marine data and information, using the most appropriate information management and information technology; (d) assist Member States to acquire the necessary capacity to manage marine data and information and become partners in the network; and (e) support international scientific and operational marine programmes of IOC and WMO and their sponsor organizations with advice and data management services. The data covered by the Exchange was substantially expanded by incorporating the Ocean Biogeographic Information System, an ongoing process. With a volume of data of 30 million records, covering 898 individual data sets and growing.

Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

222. In furtherance of the need for a cross-sectoral, interdisciplinary and science-based approach to marine environmental affairs and the need to foster coordination and cooperation among UN agencies with relevant responsibilities, the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection was founded in 1967 as a joint advisory mechanism. It provides advice to its sponsoring agencies on issues of interest upon request. In recent years, following an in-depth internal review in 2001, the Group has undergone a modernization and revitalization process that led to the strengthening of its networks by increasing the number of developing country experts participating in its activities, and supported the participation of the Group in the Regular Process. The capacity-building element was also built into its main activities. The Group participated in the “Assessment of Assessments”, conducting a review of existing global and regional marine assessments related to marine pollution, including ship-based pollution and atmospheric input to the oceans. 223. The Group periodically produces a global report on issues regarding the degradation of the marine environment, providing advice in response to significant events involving risks to human health and marine ecosystems. Its current programme relates to issues such as oil inputs into the sea from sea-based activities, environmental risk assessment and communication in coastal aquaculture, hazards of chemicals carried by ships, environmental exposure models for application in seafood risk analysis, and the use of science in marine environmental policy-making processes.

224. The Group’s main functions also include the identification of new and emerging issues that threaten the marine environment. For example, in 2008, the Group issued a joint statement with the Scientific Committee on Oceanic Research on ocean fertilization or deliberate nutrient additions to the Ocean. In its recent publication, the Group also highlighted the need to refocus on mercury in exploited fish species, identifying mercury as a cross-cutting issue in the Transboundary Waters Assessment Programme.

Science, assessments and decision-making

225. Despite many successful and pioneering research initiatives, important gaps still exist in our understanding of the functioning of marine ecosystems and the status of the oceans globally. Assessments are important in order to better understand the status of and trends in the condition of ecosystems. In particular, assessments help gauge the vulnerability, resilience and adaptability of various ecosystems as well as the goods and services that they provide to the well-being and livelihood of people. Assessments also contribute to a better understanding of the manner and the extent to which human activities affect ecosystems and thus help identify appropriate management responses.

Intergovernmental science-policy platform on biodiversity and ecosystem services

226. The Johannesburg Plan of Implementation, by its paragraph 36, highlighted the need to improve the scientific understanding and assessment of marine and coastal ecosystems as a fundamental basis for sound decision-making. Consultations undertaken in 2005 to 2008 towards an International Mechanism of Scientific Expertise on Biodiversity and the global strategy for the follow-up to the Millennium Ecosystem Assessment (see para. 232 below) stressed the need for an intergovernmental science-policy platform on biodiversity and ecosystem services. Marine and coastal biodiversity and ecosystem services are important for sustainable development and current and future human well-being, particularly with regard to poverty eradication. In 2010, at an ad hoc intergovernmental and multi-stakeholders meeting, it was agreed to establish the Platform, which would aim at strengthening the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. It would identify key scientific information needed for policymakers; perform regular and timely assessments of knowledge; support policy formulation and implementation; and prioritize key capacity-building needs and catalyze financing for capacity-building activities.

184 IMO, FAO, IOC, WMO, IAEA, the United Nations, UNEP, UNIDO and UNDP.
185 Resolution 57/141 para. 45 and its reference to the Group.
186 A/65/69, para. 278.
187 A/63/63, para. 379.
190 GESAMP et al., Proceedings of the GESAMP International Workshop on plastic particles as a vector in transporting persistent, bio-accumulating and toxic substances in the oceans (Paris, 2010).
191 See http://ipbes.net/.
192 Decision 55.XI.4 of the Governing Council/Global Ministerial Environment Forum at its eleventh special session.
193 See UNEP/GC.26/6, annex.
227. The outcome of the meeting was transmitted to the sixty-fifth session of the General Assembly, including its high-level segment on biological diversity, held on 22 September 2010 (A/65/383). The high-level segment noted the important linkage between scientific knowledge and effective policymaking and stressed the importance of establishing the platform.\footnote{Accordingly, the General Assembly, by its resolution 65/162 requested the Governing Council of UNEP to convene a plenary meeting to determine modalities and institutional arrangements for the platform at the earliest opportunity. In that regard, the UNEP Governing Council/Global Ministerial Environment Forum, at its twenty-sixth session, requested, by its decision 26/4, that UNEP convene such meeting later in 2011. It also requested UNEP to work in close cooperation with UNESCO, FAO and UNDP to ensure the proper implementation of the platform until the establishment of the secretariat of the platform. In that regard, UNEP was invited to submit an offer of interest in hosting and otherwise supporting the Secretariat of the Platform in the longer term.} UNEP was tasked to prepare comprehensive strategic assessments of global international waters in support of decision-making. By its decision GC 22/1/III, the UNEP Governing Council mandated the Centre to provide a range of biodiversity-related services to UNEP, the biodiversity-related conventions and their constituent parties and other bodies in the non-governmental and private sectors. One of the Centre’s main programmes is for Marine Assessment and Decision Support, which seeks to provide strategic scientific information to guide decisions affecting the marine and coastal environment. Among its activities, it has created improved key marine and coastal data sets, which provide the knowledge base for decision-making. Those data sets include the Global and Regional Marine Assessment Database,\footnote{Developed as a collaboration between UNEP and the Centre, and IOC to support the Group of Experts established pursuant to General Assembly resolution 60/30 to carry out the “Assessment of Assessments” towards a regular process for the global reporting and assessment of the state of the marine environment, including socioeconomic aspects.} the World Database on Protected Areas-Marine, and the Global Coral Disease Database.\footnote{Collaborative project between UNEP and the Centre, and the United States’ National Oceanic and Atmospheric Administration — National Marine Fisheries Service.} UNEP and the Centre also work to enable the integration and use of those data sets into relevant environmental and socio-economic assessments and decision support tools for better management of marine and coastal environments.

228. Since 2000, the World Conservation Monitoring Centre has provided UNEP with access to biodiversity information in support of decision-making. By its decision GC 22/1/III, the UNEP Governing Council mandated the Centre to provide a range of biodiversity-related services to UNEP, the biodiversity-related conventions and their constituent parties and other bodies in the non-governmental and private sectors. One of the Centre’s main programmes is for Marine Assessment and Decision Support, which seeks to provide strategic scientific information to guide decisions affecting the marine and coastal environment. Among its activities, it has created improved key marine and coastal data sets, which provide the knowledge base for decision-making. Those data sets include the Global and Regional Marine Assessment Database,\footnote{See press release of the General Assembly, GA/10992 — ENV/DEV/1158, available from www.un.org/News/Press/docs/2010/ga10992.doc.htm.} the World Database on Protected Areas-Marine, and the Global Coral Disease Database.\footnote{Developed as a collaboration between UNEP and the Centre, and IOC to support the Group of Experts established pursuant to General Assembly resolution 60/30 to carry out the “Assessment of Assessments” towards a regular process for the global reporting and assessment of the state of the marine environment, including socioeconomic aspects.} UNEP and the Centre also work to enable the integration and use of those data sets into relevant environmental and socio-economic assessments and decision support tools for better management of marine and coastal environments.

229. UNEP, in partnership with the Regional Seas Conventions and Action Plans, undertook the development of the Marine Biodiversity Assessment and Outlook Series that was launched at the tenth Conference of Parties to the Convention on Biological Diversity. Those assessments (19 regional reports) provided a perspective into the current state of marine biodiversity. The results indicate that marine biodiversity is currently under threat from different drivers of change such as land-based pollution, the overexploitation of fisheries, the introduction of marine invasive species and the growing effects of climate change, including ocean acidification.\footnote{See hqweb.unep.org/dewa/giwa/.} Global International Water Assessment

230. Between 1999 and 2006, the UNEP Global International Water Assessment was tasked to prepare comprehensive strategic assessments of global international water bodies to determine the root causes of the environmental degradation. The Water Assessment would also provide concrete proposals for their sustainable use and development.\footnote{See www.maweb.org/en/About.aspx#1 and www.maweb.org/en/Partners.aspx.}

231. Over its seven years of existence, the Water Assessment produced integrated assessments on all of its targeted 66 transboundary marine water bodies. The Water Assessment also provided scientific and data analysis that could be used by other international, regional and global bodies and activities in the field of international waters in support of their analyses or sustainable development activities.

Millennium Ecosystem Assessment

232. Initiated in 2001 and completed in 2005, the Millennium Ecosystem Assessment was intended to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those systems and their contribution to human well-being.\footnote{The findings of the Millennium Ecosystem Assessment provided a scientific appraisal of the condition and trends in the world’s ecosystems, including marine ecosystems, and the services they provide and options to restore, conserve or enhance their sustainable use.} The special case of small island developing States within the context of sustainable development was first formally acknowledged by the international community at UNCED in 1992 (see paras. 18, 310-314).

D. Small island developing States

233. Agenda 21, in its paragraph 17.124, states that “Small island developing States and islands supporting small communities are a special case both for environment and development. They are ecologically fragile and vulnerable. Their small size, limited resources, geographic dispersion and isolation from markets, place them at a disadvantage economically and prevent economies of scale”. They are, by their very nature, highly dependent on oceans and seas for the livelihoods of their people, while also remaining extremely vulnerable to sea-level rise and the adverse effects of climate change, pollution and other stresses on oceans and marine resources.

234. While small island developing States share many of the characteristics of other developing countries, they face unique challenges which are widely recognized. The special case of small island developing States within the context of sustainable development was first formally acknowledged by the international community at UNCED in 1992 (see paras. 18, 310-314).
235. Since UNCED, a number of international frameworks, as outlined below, were established that seek to address the limitations faced by small island developing States in achieving sustainable development.

1. Policy framework

Barbados Programme of Action

236. The United Nations Global Conference on the Sustainable Development of small island developing States, held in Barbados in 1994, reaffirmed the principles and commitments to sustainable development embodied in Agenda 21 and translated them into specific policies, actions and measures to be taken at the national, regional and international levels to enable small island developing States to achieve sustainable development. The Conference adopted the Barbados Programme of Action for the Sustainable Development of SIDS (Barbados Programme of Action), a 14-point programme that identifies priority areas and specific actions necessary for addressing the special challenges faced by small island developing States. The Barbados Programme of Action further identified cross-sectoral areas requiring attention: capacity-building; institutional development at the national, regional and international levels; cooperation in the transfer of environmentally sound technologies; trade and economic diversification; and finance.

237. The Barbados Programme of Action highlighted the special challenges and constraints that cause major setbacks to the socio-economic development of small island developing States, some of which had already been addressed in Agenda 21, including small size and geographic isolation that prevent economies of scale. In addition, the Barbados Programme of Action underlined the excessive dependence of small island developing States on international trade; high population density, which increases the pressure on already limited resources; the overuse of resources and premature depletion; relatively small watersheds and threatened supplies of fresh water; costly public administration and infrastructure; and limited institutional capacities and domestic markets.

238. The comprehensive structure of the Barbados Programme of Action developed principles and set out specific strategies at the national, regional and international levels over the short, medium and long terms in support of the sustainable development of small island developing States. The Barbados Programme of Action emphasized the crucial importance of oceans to small island developing States across several of its thematic areas, including climate change and sea level rise, waste management, coastal and marine resources, tourism resources, biodiversity resources, transport and communication, science and technology.

Monterrey Consensus

239. The Monterrey Consensus, adopted at the International Conference on Financing for Development in March 2002, put forward a framework for a global development partnership whereby developing countries take responsibility for their own poverty reduction and donor countries support that endeavour through increased financial aid and more open trade. The consensus is a commitment to a broad-based development agenda that takes into account poverty reduction and environmental sustainability as well as economic growth. The consensus highlighted certain groups of countries that require particular attention, including small island developing States, reaffirming the international community’s commitment to the Barbados Programme of Action.

240. The Consensus called for the reinforcement of national efforts in capacity-building in such areas as institutional infrastructure, human resource development and public finance, particularly in small island developing States and other vulnerable groups. The consensus also highlighted the importance of enhanced and predictable access to all markets for the exports of developing countries, including small island developing States, and the need for reinforced support for trade-related training, capacity and institution building and trade-supporting services, with special consideration given to small island developing States and other vulnerable groups. Finally, the Consensus recognized the fact that for many small island developing States, official development assistance was still the largest source of external financing and was critical to the achievement of the Millennium Development Goals and other internationally agreed development targets.

Mauritius Strategy

241. In 2005, at a review meeting held in Port Louis, Mauritius, the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of small island developing States was adopted at the Mauritius International Meeting with a view to addressing the implementation gap that still confronted small island developing States. Participants at the meeting recognized that there were still constraints in fulfilling the activities of the Barbados Programme of Action. In particular, small island developing States had pursued the implementation of the Plan within the constraints posed by limited financial resources, including an overall decline in official development assistance.

242. The Mauritius Strategy set forth actions and strategies in 19 priority areas that build on the original 14 thematic areas of the Barbados Programme of Action. New additional thematic areas in the Mauritius Strategy included graduation from least developed country status, trade, sustainable production and consumption (as called for by the Johannesburg Plan of Implementation), health, knowledge management, and culture — all of which are intended to support small island developing States in achieving internationally agreed targets and goals, such as the Millennium Development Goals. In line with the Goals, the framework of the Strategy put in place measures to build resilience in small island developing States.

243. During the sixty-fifth session of the General Assembly, held in 2010, Member States conducted a high-level five-year review of the Mauritius Strategy (A/65/115) to assess progress made, lessons learned and constraints encountered in addressing the vulnerabilities of small island developing States. Within the context of that review, the continuing and emerging issues for small island developing States in relation to oceans and seas were highlighted, along with progress achieved and remaining implementation gaps.

244. The most recent General Assembly resolution on follow-up to and implementation of the Mauritius Strategy (65/156) specifically acknowledged “the particular relationship of small island developing States with the oceans and the need for sustainable development and management of their ocean and marine resources”.

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245. General Assembly resolution 65/2 acknowledges that small island developing States “have demonstrated their commitment to promoting sustainable development”, including in establishing coastal and marine protected areas, but that “climate change and sea-level rise continue to pose a significant risk to small island developing States and their efforts to achieve sustainable development and, for some, represent the gravest of threats to their survival and viability”. It also recognizes that small island developing States “continue to be heavily dependent on their coastal and marine resources” and face development challenges including “global overfishing and destructive fishing practices, and barriers to increased participation in fisheries and related activities”. It reiterates the continuing need for “improved conservation of coastal and marine resources and integrated coastal management” and urges the international community to continue and enhance its support for small island developing States to “strengthen their implementation of integrated coastal zone management strategies and their scientific research capacity”. To that end, small island developing States and the “relevant regional and international development partners should work together to develop and implement regional initiatives”.

246. By its paragraph 18, resolution 65/2 also reiterates the “need for the adoption and implementation of effective measures at the international, regional and national levels that provide for the long-term sustainable use of fisheries resources, given their vital importance to the sustainable development of small island developing States”. In that regard, the international community reaffirmed the commitment to urgently reduce the capacity of the world’s fishing fleets to levels commensurate with the sustainability of fish stocks; to promote the full participation of small island developing States in regional fisheries management organizations; to assist small island developing States in developing their fisheries sector, including through capacity-building, so as to facilitate a greater level of participation in high seas fisheries; to further strengthen the capacities of small island developing States to carry out monitoring and implement enforcement measures to combat illegal, unreported and unregulated fishing, and overfishing; and to urge the mainstreaming of efforts to assist small island developing States with other relevant international development strategies, with a view to enhancing international coordination.

247. The protection of oceans from waste was highlighted in paragraph 21 of resolution 65/2, which called upon the international community “to further assist small island developing States in the development of appropriate systems for recycling, waste minimization and treatment, reuse and management, and mechanisms to protect the oceans and coastal areas from waste and toxic materials, including through the creation and strengthening of systems and networks for the dissemination of information on appropriate environmentally sound technologies, recycling and disposal technologies”.

2. Activities

Sustainable fisheries management

248. Livelihoods, food security, culture, leisure, government revenue and employment in small island developing States depend to varying degrees on fish stocks. For example, tuna fisheries constitute by far the most valuable fishing activity in the Pacific region, contributing more than 10 per cent of GDP and over 50 per cent of exports in some Pacific small island developing States (A/65/115).

249. Fisheries management issues have become more challenging for small island developing States as they struggle to cope with their commitments to international fisheries agreements and international programmes of action. Capacity constraints, including both insufficient and inappropriate capacity, have significant negative effects on the sustainability of fisheries.

250. The five-year review of the Mauritius Strategy found that some progress had been made in sustainable fisheries management. Small island developing States have established national vessel monitoring systems, introduced national plans and policies and are developing aquaculture to promote food security. At the regional level, the Western and Central Pacific Ocean Fisheries Commission meeting of 2008 adopted measures that included a cut of 10 per cent in long-line fishing in 2009; periods of closure of the high seas and exclusive economic zones to fishing using Fish Aggregating Devices; and future 100 per cent coverage of purse seine fishing vessels with observers.

251. Continuing challenges in fisheries management include developing ecosystem-based sustainable coastal fisheries, strengthening national tuna industries (Pacific, Atlantic and Indian Oceans, Mediterranean and South China Seas), improving surveillance of territorial waters, introducing rights-based fisheries management systems (Pacific) and improving compliance with sanitary measures for fish handling (Pacific). The continuing proliferation of illegal, unreported and unregulated fishing across the Pacific is of particular concern and will require stronger conservation and management measures to adequately protect current tuna stocks from overexploitation.

Climate change

252. Small island developing States are especially vulnerable to climate change due to their small size, narrow resource base, high susceptibility to natural hazards, low economic resilience, and limited human and technological capacity for mitigating and adapting to the effects of climate change (see also paras. 311-312). Certain small low-lying islands are facing the increasing threat of the loss of their entire national territories. Others are also experiencing the effects of increasing frequency of cyclones, storms and hurricanes associated with climate change, causing major set-backs to their socio-economic development. The economic downturn includes loss of agricultural land and infrastructure, and negative impacts on fisheries and tourism. Environmental effects include loss of biodiversity, saltwater intrusion and the degradation of terrestrial and wetland habitats. Social effects include the destruction of human settlements, the loss of livelihoods and negative effects on health and access to freshwater. The very existence of low-lying atoll nations, such as Kiribati, Maldives, the Marshall Islands and Tuvalu, is threatened by climate change-induced sea-level rise (A/65/115).

253. Small island developing States, like other countries, face serious problems in terms of reducing carbon dioxide emissions, an issue that is high on the political agenda. In 2006, emissions ranged from as low as 0.16 metric tons per capita in Timor-Leste to as high as 25 metric tons per capita in Trinidad and Tobago. From 1990 to 2005, carbon dioxide intensity increased in 15 of the 29 small island developing States for which data was available.201

than one half of the waste in small island developing States is organic, which underlines the importance of composting and other alternatives to incineration.\footnote{Republic of Mauritius, “Mauritius Strategy for Implementation National Assessment Report 2010”}

259. Significant progress can be reported from many small island developing States in terms of improving waste management. Waste collection coverage between 60 and 90 per cent of the population, with the exception of Haiti, where the figure was much lower. Some progress has been made to achieve the Millennium Development Goal target of at least 80 per cent access to sanitation, with the percentage of small island developing States having surpassed 90 per cent. However, high incidences of eutrophication due to the dumping of sewage into rivers and coastal waters are also reported. While composting of sewage waste is occasionally practiced in some small island developing States, the levels of recycling and composting are insufficient. The high cost of modern sewage treatment plants is a constraint, cheaper biological treatment methods that are especially suited to small island climatic conditions are sometimes used. The wide range of impacts associated with climate change pose a challenge in terms of policy and planning. Legislative changes were made in Kiribati, but the lack of data and understanding of climate change issues continues to constrain progress, especially in terms of local adaptation measures in rural and outer islands.

260. The special characteristics of small island developing States also limit the viability of recycling efforts is constrained by the relatively small quantities of waste and the high energy and transport costs. Where land is scarce, incineration is often chosen, an option that has turned out to be unsustainable in terms of pollution.

261. Small island developing States are increasingly vulnerable to the transboundary movement of hazardous wastes and chemicals originating from land- and sea-based activities, including the movement of waste from developed countries, including Kiribati, Samoa, Sao Tome and Principe, Tuvalu and Vanuatu. Multiscientific adaptation studies were also carried out in Mauritius and the Seychelles have developed national solid waste management policies, acts or programmes. The Change Centre has provided assistance in capacity-building. Support from the international community, including the United Nations Development Programme, the Global Environment Facility, the GEF Least Developed Countries Fund, national adaptation programmes of action and the Pacific Adaptation Programme, remains limited, and small island developing States with higher incomes have found it particularly difficult to tap into funding gap for adaptation projects. Support from development partners will be required on a much larger scale.

262. Due to their small size and geological, topographical and climatic conditions, small island developing States are particularly vulnerable to a range of climate change impacts, including sea-level rise, storm surges, ocean acidification, the increased impact of extreme events, such as hurricanes, droughts and floods, and changing patterns of precipitation. Good practices in the area of adaptation need to be shared effectively and a large funding gap for adaptation projects is apparent in small island developing States.

263. In the Pacific, from 2006 to 2009, there was a number of significant initiatives in the region’s water and sanitation sector, largely guided by the Pacific-Wide Water and Sanitation Sector Programme (A/65/115).
Plan, into which water, sanitation and hygiene challenges were incorporated in 2006. The Pacific Hydrological Cycle Observing System was established in 2007 to assist Pacific small island developing States in addressing the lack of capacity and related infrastructure for hydro-meteorological data collection and storage.203

264. Pacific small island developing States primarily dependent on surface water (the Cook Islands, Federated States of Micronesia, Fiji, Palau, Papua New Guinea, Samoa, Solomon Islands and Vanuatu) have progressed with the installation of rain gauges and water resources assessments of major rivers. Support for groundwater-dependent countries (Kiribati, Marshall Islands, Nauru, Niue, Tonga and Tuvalu) has focused on the consolidation of monitoring procedures and developing consistent and reliable data sets. For rainwater harvesting-dependent countries (Nauru and Tuvalu), geographic information system databases have been developed to optimize rainwater harvesting capture and storage.

265. In the Caribbean region, most countries have relatively high levels of access to drinking water and sanitation. The period 2006 to 2009 saw increased awareness of climate change-induced drought conditions that may prevail in the southern Caribbean and of the need for water conservation. Wastewater management and sewage needs assessment projects have been supported through UNEP, the Integrating Watershed and Coastal Area Management Project and the Caribbean Environment Programme.204

Sustainable tourism

266. Many small island developing States depend on the tourism sector as a key contributor to development and economic growth. However, the development of the tourism sector also presents environmental and cultural challenges.

267. The promotion of ecotourism, cruises, events and diving has been on the agenda of many small island developing States, but concrete development in those areas has generally been limited. Pacific small island developing States developed a regional cruise strategy in 2008, and those in the Caribbean are exploring similar options. Ecotourism is being promoted in various forms in Cuba, Fiji, Sao Tome and Principe, Seychelles and Tuvalu, among others.

268. In the past five years, there have been many important advances in terms of regional institutions, especially in the Caribbean and the Pacific. For example, the Pacific Plan adopted by the Pacific Island Forum translates the Mauritius Strategy into a regional framework that has effectively guided national and regional policy and institutional developments. The region is also closely connected with international support networks through the United Nations regional commission, agencies and funds.

269. In the Caribbean, the Regional Coordinating Mechanism allows countries to achieve effective coordination of the various sustainable development initiatives, while providing assistance and support at the national level. The operationalization of the Mechanism as the main instrument for the implementation of the Mauritius Strategy was carried out in close partnership between the Economic Commission for Latin America and the Caribbean, UNEP, the CARICOM secretariat, the Association of Caribbean States and the Organization of Eastern Caribbean States secretariat.

270. Availability and access to good quality data for decision-making is an important issue for small island developing States. However, global data systems (see also para. 221) are available for spatial and real time data, including satellite and air photo imagery and remotely sensed data used in early warning tools for climate variability and natural hazards. Examples of initiatives include the South Pacific Applied Geoscience Commission GeoNetwork, the Caribbean Marine Protected Area Management Network and the Pacific Regional Information System.

IV. Gaps, challenges and emerging issues

A. Gaps

271. The sustainable use of oceans and seas cannot be achieved without addressing a wide range of factors, including new and emerging issues. In particular, the continued degradation of the marine environment makes it more difficult to achieve the goals established at major summits on sustainable development, such as adoption of an ecosystem approach to natural resources management and integrated coastal and ocean management. The pressing need to gain access to ocean resources and to exploit them in a sustainable manner has spurred the international community into re-examining ocean governance issues,205 including from the perspective of cooperation and coordination.206 States have also identified the difficulties linked to the implementation, monitoring, compliance and enforcement of the Convention and existing binding and non-binding international instruments. The General Assembly has consistently brought to the attention of all stakeholders the need to improve cooperation and coordination at the national, regional and global levels, in accordance with the Convention, to support States in implementing integrated management and the sustainable development of oceans and seas (resolution 65/37).

1. Gaps in implementation of the legal and institutional framework for the sustainable development of oceans and seas

272. The Convention, which is of strategic importance as the basis for national, regional and global action and cooperation in the marine sector, is now supplemented by two implementing Agreements. In addition, there are a number of specialized instruments, some of which are described in the present report, that provide the legal and institutional framework for oceans and seas. They relate, inter alia, to biodiversity (see sect. III-C, 1) living marine resources (see sect. III-C, 2), shipping (see paras. 168-172), marine scientific research (see sect. III-C, 5); protection and preservation of the marine environment and protection of specific areas and species (see sect. III-C, 3).

273. It is noted however, that while States have highlighted in particular the importance of increased cooperation and coordination, including cross-sectoral and
capacity-building, the full comprehension at the national level of that framework remains elusive. Limited educational, training and technical capacity and financial resources are recurrent challenges to effective implementation of international instruments (A/CONF.216/PC/8), including the Convention.

274. A number of specific issues have been identified as requiring heightened attention to strengthen the sustainable development of oceans and seas. They include flag State implementation and port State enforcement, the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, and marine genetic resources and illegal, unregulated and unreported fishing (see also sect. IV).

2. Knowledge or scientific gaps

275. Scientific knowledge plays an essential role as a basis for sound decision-making and in that regard the need to bridge the gap between policy demands and scientific research has been underlined. Identifying gaps in knowledge is also important to determine research priorities. The approach to understanding the oceans needs to be integrated, interdisciplinary and intersectoral. Cooperative approaches among international organizations involved in marine issues could be beneficial in that regard.

276. Within the context of discussions at the General Assembly Working Group (see paras. 57-59), delegations have identified a number of areas where more studies were needed. For example, it was noted that the information on vulnerable habitats and ecosystems was often incomplete and that significant gaps existed in the understanding of ocean processes. That called for regular monitoring of ocean natural systems to establish a baseline upon which to compare changes and trends, and to provide science-based information to decision makers. In that regard, predictive modelling could overcome some knowledge gaps. Emphasis has been given (A/65/69/Add.2) to the need to strengthen long-term observations and monitoring of the state of the marine environment with the establishment of the Regular Process (see paras. 60-65 above). The need to enhance knowledge to address climate change adaptation and mitigation by, inter alia, identifying current scientific and policy gaps in order to promote sustainable management, conservation and enhancement of natural carbon sequestration services of marine and coastal biodiversity was also expressed. Furthermore, with the view to improving the sustainable management of coastal and marine areas and to increasing the resilience of coastal and marine ecosystems, the identification of underlying drivers of marine and coastal ecosystems loss and destruction would need to be addressed.

277. Developing States including least developed States, African coastal States and small island developing States, also emphasized the need for marine science and transfer of technology to fill knowledge gaps.

B. Challenges

1. Maritime delimitation

278. Clearly delineated maritime boundaries identify the areas from which coastal States, by virtue of their sovereignty or sovereign rights and jurisdiction, derive benefits through the exploitation of their marine living and non-living resources. In addition, maritime boundaries are central to the protection of the marine environment and the sustainable use of marine resources, as they make it possible to determine which coastal State has responsibilities in that regard. Thus, maritime boundaries are one of the key factors for sustainable development.

279. The establishment of maritime boundaries defines the extent of maritime areas beyond national jurisdiction, which are also important for achieving sustainable development.

280. The delineation of the outer limits of the continental shelf, including beyond 200 nautical miles from the baselines, would bring certainty in the exercise of rights and jurisdiction in national and international areas. In that context, the work of the Commission on the Limits of the Continental Shelf is of importance.

281. The technical complexity of the delineation of the outer limits of the continental shelf presents a challenge for many developing States that do not have the financial resources or the expertise to carry out the required surveys and other scientific work. Several States, including a number of developing States have made a submission to the Commission and many others, have provided preliminary information indicative of the date they intend to make a submission.

282. Where maritime boundary delimitation by agreement is delayed as a result of historic factors or legal and political difficulties, articles 74 and 83 of the Convention stipulate that “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 (of the Convention). Pending agreement [...] the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and, during that transitional period, not to jeopardize or hamper the reaching of the final agreement”.

283. The need to acquire complex scientific and technical knowledge for the delineation of the outer limits of maritime zones, in particular the extended continental shelf, and the political and historic intricacies of maritime boundary delimitation often prove to be considerably challenging, especially for developing countries. Capacity-building and mechanisms, both bilateral and regional, facilitating boundary negotiations should be encouraged to address these challenges.

216 This issue has permeated for example discussions on all topics of the Informal Consutlative Process; see A/64/66, para. 48.
2. Implementation and enforcement

284. The need to enhance effective implementation and enforcement of the international legal and policy instruments relating to oceans and the seas continues to be a challenge for the international community. Although lack of capacity and technical knowledge contribute to that issue, insufficient political will and lack of long-term, integrated planning also play a role.

285. Those issues have been raised in numerous forums, including in the programme areas in Agenda 21 and in the Johannesburg Plan of Implementation. Although flag States have primary responsibility for ensuring the effective implementation and enforcement of such instruments, coastal States and port States have had an increasingly important role due to the failure of some flag States to exercise effective control over vessels flying their flag. In that regard, lack of effective control by flag States can pose a threat to the safety of navigation and the marine environment and can lead to the overexploitation of living marine resources.

286. Issues relating to implementation and enforcement have been principally addressed by the General Assembly in the context of its annual resolutions on oceans and the law of the sea and sustainable fisheries. In that regard, the General Assembly, by its resolutions 65/37 and 65/38, has emphasized the importance of State participation in existing instruments and increased efforts in the effective implementation of such instruments, including through effective flag State control, port State control, market-related measures and monitoring, control and surveillance, as well as modern approaches such as the precautionary and ecosystem approaches. It has also reiterated the essential need for cooperation, including through capacity-building and the transfer of marine technology, to ensure that all States are able to implement the Convention and benefit from the sustainable development of the oceans and seas, and participate fully in global and regional forums and processes dealing with oceans and law of the sea issues.

287. These issues have also been addressed by the Informal Consultative Process, and by the Working Group. The Secretary-General has also provided regular reports to the General Assembly on issues relating to implementation and enforcement. In addressing those issues, particular attention has been given to the need to examine and clarify the role of the “genuine link” in relation to the duty of flag States to exercise effective control over vessels flying their flag. In 2003, the Secretary-General formed an inter-agency task force in response to calls for an investigation into the causes of the failure of some vessels to conform to international regulations regarding ship safety, labour conditions, fisheries conservation and protection of the marine environment. IMO also convened an ad hoc consultative meeting of senior representatives of international organizations in 2005 on the subject of the “genuine link” (A/61/160).

288. In order to improve implementation and enforcement by flag States, IMO, by its resolutions A.946(23) and A.973(24), approved the Voluntary IMO Member State Audit Scheme to provide a comprehensive and objective assessment of how effectively flag States administer and implement the mandatory IMO instruments covered by the Audit Scheme. In 2009, the IMO Assembly also endorsed the decision of the IMO Council and agreed to make the Audit Scheme an institutionalized, mandatory scheme that will be phased in through the introduction of amendments to IMO instruments in 2013, for entry into force in January 2015. The shipping industry has also developed guidelines on flag State performance in order to encourage ship operators to examine the performance of a flag State and to put pressure on States to effect improvements that may be necessary, especially in relation to safety of life at sea, the protection of the marine environment and the provision of acceptable working and living conditions for seafarers.

289. In regard to port State measures, a number of States continue to coordinate their activities to ensure safety and security of international shipping in the context of regional port State control organizations, including through joint concentrated inspection campaigns to ensure compliance with international safety, security and environmental standards, including the provision of adequate living and working conditions. However, there is a general need for harmonization of procedures, interchange of information and coordination among the various regimes, taking into consideration regional differences, while working towards the achievement of a standardized procedure.

290. In the context of fisheries, the General Assembly has continued to urge enhanced action to eliminate illegal, unregulated and unreported fishing by vessels flying “flags of convenience”, to require that a “genuine link” be established between States and fishing vessels flying their flags and to clarify the role of the “genuine link” in relation to the duty of States to exercise effective control over such vessels. It has also recently urged States operating open registry to effectively control all fishing vessels flying their flag, as required by international law, or otherwise stop open registry for fishing vessels.

291. In that regard, FAO has been working to develop a global record of fishing vessels, refrigerated transport vessels and supply vessels, which is envisaged as a global repository designed to provide reliable identification of vessels authorized to engage in fishing or fishing-related activity. A technical consultation will also be convened by FAO in May 2011 to develop guidelines on flag State performance.
292. The efforts by the international community will assist in addressing gaps in the existing legal and policy framework and improve oceans governance, generally. There is a need, however, for enhanced cooperation and coordination in regard to implementation and enforcement, including through active participation in regional bodies, exchange of information, joint programmes and improved capacity-building and transfer of technology.

3. Capacity-building

293. Capacity-building has a cross-cutting character and relevance to oceans and law of the sea issues that have been widely recognized, particularly as several needs of States are relevant to more than one area or sector of oceans and the law of the sea. The General Assembly, by its resolution 65/37, has highlighted the need to ensure, through capacity-building, that least developed countries and small island developing States as well as coastal African States are able to implement the Convention and to benefit from the sustainable development of the oceans and seas. At the eleventh meeting of the Informal Consultative Process, many delegations highlighted that capacity-building should aim at developing capacities for effective participation in economic activities, in particular in sustainable fisheries, and should not be limited to the implementation of international commitments.

294. The framers of the Convention were keenly aware of the need for capacity-building, especially in the absence of any fund or assistance programme embedded in the Convention. For example, the Convention, in Part XIV on development and transfer of marine technology, requires States to promote the development of the marine scientific and technological capacity of developing States with regard to the exploration, exploitation, conservation and management of marine resources, the protection of the marine environment, marine scientific research, and other activities in the marine environment compatible with the Convention in order to accelerate the social and economic development of developing States.

295. Chapter 17 of Agenda 21 sets out for each of the seven programme areas 12 specific suggestions about capacity-building, financing and cost evaluation, scientific and technological means and human resource development. In his report of 9 March 2001 (A/56/58), the Secretary-General provided detailed considerations on capacity-building under each of the programme areas in Chapter 17 of Agenda 21. Chapter 34 of Agenda 21 is dedicated entirely to capacity-building and the transfer of environmentally sound technology, cooperation and capacity-building. It also highlights the support of endogenous capacity-building and the promotion of long-term technological partnerships between holders of environmentally sound technologies and potential users.

296. Chapter 37 of Agenda 21 is dedicated entirely to capacity-building and the World Summit reconfirmed the priority of building capacity to assist developing countries to obtain their sustainable development goals. The need for capacity-building especially for small island developing States is notably included in the Barbados Plan of Action and the ensuing Mauritius Strategy. The special needs of Africa were highlighted in the United Nations Millennium Declaration. More recent relevant outcomes include the 2008 Doha Declaration on Financing for Development and the Acrea Agenda for Action.

297. At the sectoral level, a number of capacity-building activities and initiatives are being carried out at the international, regional and national levels (A/65/69). For example, with regard to early warning systems (see also paras. 219-220), IOC organizes installations and upgrades of sea level stations in numerous countries in the Indian and Pacific Oceans and Caribbean and Mediterranean Seas, and provides a data portal on sea level station monitoring. Numerous capacity development initiatives have been undertaken in relation to the Global Ocean Observing System and Global Sea Level Observing System, including sea level observations and analysis and technical visits. Through an agreement with the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, IOC provides Member States real-time access to the organization’s seismic stations for tsunami warning purposes.

298. No comprehensive assessment has been carried out at the global level of the capacity-building needs of States in relation to ocean affairs and the law of the sea. In previous reports, the Secretary-General has provided information on needs related to marine science and technology. In its report of 23 July 2010 (A/65/164), the General Assembly also highlighted ongoing capacity-building needs of States, inter alia, for cross-sectoral and multi-level coordination, data accessibility, infrastructure, technology and equipment, ocean mapping, maritime delimitation and delimitation, human resource development, financial resource needs, capacity for enforcement and needs in regard to other sustainable use of the oceans. Furthermore, all meetings of the Informal Consultative Process have discussed the need for capacity-building and identified capacity gaps in relation to marine scientific research; transfer of environmentally sound technologies associated with the conservation and sustainable development and use of marine resources including marine genetic resources; sustainable fisheries; development and improvement of hydrographic services including transition to electronic nautical charts; and the enhancement of technologies and capacities to respond to threats to maritime security and safety.

299. During discussions on the issue of capacity-building at the Informal Consultative Process, a number of challenges in implementing capacity-building activities and initiatives have been identified. For example, it has been highlighted that needs assessments are critical to priority-setting and are essential to design capacity-building programmes that reflect specific conditions and priorities of beneficiary countries, and that capacity-building needs to encompass financial, human resource, institutional and scientific capacity and be sustainable.

300. Opportunities for ways forward were also identified, including encouraging capacity-building through the creation and strengthening of national and regional partnerships between holders of environmentally sound technologies and potential users.

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232 A/64/66, para. 155.
233 A/65/69, paras. 33-94.
234 A/65/164, para. 12.
236 A/64/66, para. 155.
239 A/65/69, para. 33.
240 See A/65/164 and A/65/69, para. 56.
centres for technological and scientific research, as provided for in the Convention, and focusing on strengthening South-South cooperation as an innovative way to build capacity and cooperative mechanisms.

301. In his report of 22 December 2010 (A/CONF.216/PC/7), the Secretary-General observed that strengthened international cooperation would be crucial to addressing ongoing and emerging sustainable development challenges which would include knowledge sharing, institutional capacity-building, technology sharing and innovative financing for a green economy transition.

4. Integrated management of oceans and seas

302. In recent years, there has been increasing international recognition of the need to manage human activities that have an effect on the marine environment and its ecosystems in an integrated, cross-sectoral manner in order to promote the sustainable development of oceans and seas and their resources.

303. Agenda 21, in its paragraph 17.1, recognized that the integrated nature of the marine environment required approaches to marine and coastal area management and development, at the national, regional and global levels, that were integrated in content and precautionary and anticipatory in ambit. It also provided, in its paragraphs 17.3 to 17.17, that coastal States should establish integrated ocean management to ensure the sustainable utilization of marine resources and the rational development of marine industries. By paragraph 30 (e) of the Johannesburg Plan of Implementation, States committed to promoting integrated, multidisciplinary and multisectoral coastal and ocean management at the national level and the provision of assistance to coastal States in developing policies and mechanisms to that end. By paragraphs 30 (d) and 32 (c) of the same, States also committed to encouraging the application of an ecosystem approach by 2010, and developing and facilitating the use of diverse approaches and tools, including the ecosystem approach and the integration of marine and coastal areas management into key sectors to promote the conservation and management of the oceans.

304. The Informal Consultative Process has considered integrated ocean management and ecosystem approaches at its fourth and seventh meetings, respectively. The General Assembly has subsequently addressed those issues in its annual resolution on oceans and the law of the sea. In particular, the Assembly has emphasized the importance of regional organizations and arrangements for cooperation and coordination in integrated ocean management, including where separate regional structures address different aspects of oceans management. The General Assembly has consistently invited States to consider the agreed consensual elements on ecosystem approaches stemming from the Informal Consultative Process. The General Assembly has also endorsed the recommendations of the Working Group related to cooperation and coordination for integrated ocean management and ecosystem approaches in relation to marine biodiversity beyond areas of national jurisdiction.

5. Environmental vulnerability of small island developing States

305. In its annual resolutions on sustainable fisheries, the General Assembly has also encouraged States to apply by 2010 an ecosystem approach and, inter alia, urged regional fisheries management organizations and arrangements to incorporate ecosystem approaches into their measures.

306. Integrated management and ecosystem approaches have been considered and promoted by a number of other international forums and organizations, including the Convention on Biological Diversity, FAO, UNEP, UNDP and GEF. At the regional and subregional levels, work has been ongoing in the context of the regional seas organizations, regional fisheries management organizations and arrangements and the large marine ecosystems to implement integrated management and ecosystem approaches. The annual reports of the Secretary-General provide information on relevant developments in those forums.

307. While some progress has been achieved, the development and implementation of integrated ocean management and ecosystem approaches still present challenges, in particular beyond areas of national jurisdiction.

308. Current sectoral mandates and approaches to addressing the impacts of human activities on the marine environment present difficulties in applying a multisectoral and multidimensional approach to the effective protection of the marine environment and the sustainable use of its resources. Other impediments include limited capacity and conflicting priorities and policies. The need for capacity-building for developing States has been particularly underlined, especially with regard to marine scientific research and transfer of technology.

309. Improved cross-sectoral cooperation and coordination would be beneficial, in particular with a view to assessing and addressing the cumulative effects of human activities on the marine environment and capacity-building needs for an integrated management of the oceans and seas.

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241 See A/58/95 and A/61/156.
242 See resolutions 57/141, 59/24, 60/30, 61/222, 62/215, 63/111, 64/71 and 65/37.
244 Resolution 65/37, para. 162. See also A/65/68, para. 13.
245 See resolutions 62/177, paras. 85 and 93; 63/112, paras. 89, 93 and 98; 64/72, paras. 97, 101 and 107.
246 See A/61/156, para. 94.
247 See A/57/57, para. 649 and A/61/156, para. 78.
248 See A/65/68, para. 13.
249 Resolution 65/37, para 162. See also A/65/68, para. 13.
311. Climate change and resulting sea level rise is an existential threat to many biodiversity of important and vulnerable marine and coastal areas, including in areas
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312. Ocean acidification and the destruction of coral reefs, critical to biodiversity
313. Pollution generated by land-based activities, marine accidents, inadequate
314. An emerging threat to biodiversity in small island developing States is that of
315. In recent years, the international community has paid increasing attention to
316. Various reports of the Secretary-General on oceans and the law of the sea, for example, A/59/298, have presented significant information on
317. Agenda 21, in its paragraph 17.46, stressed the need to protect and restore
318. The General Assembly continues to address issues of relevance to vulnerable marine ecosystems and ecologically or biologically significant areas, as also assisted by the Informal Consultative Process and the Working Group (see paras. 122 and
319. Other international and regional organizations, bodies and initiatives are also
320. Among the challenges to the effective protection of vulnerable marine ecosystems and ecologically or biologically significant areas is the fact that there is
321. The development of a common methodology for identifying such areas may
322. Vulnerable marine ecosystems and ecologically or biologically significant areas
323. The General Assembly also continues to reaffirm the need for States to continue their efforts to develop and facilitate the use of diverse approaches and tools for conserving and managing vulnerable marine ecosystems.
324. OECD, Fisheries and Aquaculture Department, Fishery and Aquaculture Committee, Conference of the Parties to the Convention on Biological Diversity, Biodiversity and Marine Fisheries (2007).
7. Crimes at sea

322. International shipping accounts for more than 90 per cent of global trade and is therefore a crucial underpinning of sustainable development.258 The rule of law on the oceans is essential to guarantee safe and secure oceans and facilitate sustainable development. An effective rule of law framework strengthens development because it underpins and enables security, social stability, sustainable development and economic growth, thereby creating and boosting confidence for investment and trade.

323. Crimes at sea may threaten the interests of States, particularly coastal States as well as collective security. They often have an impact on the safety and security of maritime navigation, including the potential to cause significant disruptions to commerce and navigation, financial losses to shipowners, increased insurance premiums and security costs, increased costs to consumers and producers. Additionally, they may adversely impact the marine environment and energy security.259 Such crimes also pose a threat to the welfare and recruitment of seafarers as they may result in the loss of life, physical harm or hostage-taking of seafarers.260 In some instances, the lives and livelihoods of fishers may also be affected.261

324. Crimes at sea are often transnational in nature, and may include illicit traffic in narcotic drugs and psychotropic substances, the smuggling of migrants and trafficking in persons by sea, illicit trafficking in arms and weapons of mass destruction, piracy and armed robbery at sea, smuggling and terrorist acts against shipping, offshore installations and other maritime interests as well as the intentional or wilful destruction of fibre optic submarine cables. They may also include intentional and unlawful damage to the marine environment, including from illegal and unregulated fishing.262

325. There are a number of international and regional instruments that address crimes at sea. Capacity-building activities to assist States with their efforts to combat various crimes at sea are also being undertaken by, inter alia, the Counter-Terrorism Committee Executive Directorate, FAO, IMO and the United Nations Office on Drugs and Crime. The African Union, the Council of Europe and the European Union, among others, are involved in capacity-building including through the convening of seminars and workshops, and the enhancement of the judicial capacity of a number of States.263 Bilateral initiatives to develop human and infrastructural capacity have also been undertaken.264

326. However, further action is still needed. That includes enhancing the effectiveness of the international legal framework and States have been called upon to, inter alia, take appropriate measures to ensure the effective implementation of agreements to which they are party. It also includes strengthening the implementation of maritime security measures; strengthening capacity-building; and improving cooperation and coordination relating to maritime security.265

C. Emerging issues

1. Marine genetic resources

327. Oceans provide a large reservoir of unique organisms with great potential not only for the development of products of benefit to human society but also to increase our knowledge and understanding of the Earth’s ecosystems and the history of life on Earth. Marine organisms, including genes, play a key role in the ecosystem services provided by the oceans. For example, planktonic marine microalgae contribute between 80 to 90 per cent to the ocean’s productivity both in terms of carbon assimilation and oxygen generation. As key players in the nutrient cycle, where they act as decomposers, marine micro-organisms also play an essential role in degrading toxins and other pollutants of both natural and human origin. They are also essential to the maintenance of marine biodiversity as genetic diversity provides a mechanism for populations to adapt to their ever-changing environment. There is therefore a delicate interdependence between biological and genetic diversity. Marine micro-organisms, which are being used in a wide range of sectors and applications, including health care, nutrition, aquaculture, bioremediation, and industry, also offer great promise for the development of products to cure diseases such as cancer, create cleaner and cost-effective technologies and industrial processes and, more generally, improve human well-being.266

328. At the World Summit in 2002, States committed, inter alia, to negotiating, within the framework of the Convention on Biological Diversity, an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources. They also encouraged successful conclusion of existing processes under the auspices of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of WIPO, and in the ad hoc open-ended working group on article 8 (j) and related provisions of the Convention on Biological Diversity. They further committed to promoting practicable measures for access to the results and benefits arising from biotechnologies based upon genetic resources, in accordance with articles 15 and 19 of the Convention on Biological Diversity, including through enhanced scientific and technical cooperation on biotechnology and biosafety, including the exchange of experts, training human resources and developing research-oriented institutional capacities.267

329. The importance of marine genetic resources to sustainable development has been highlighted in previous reports of the Secretary-General (see, in particular, A/60/63/Add.1, A/62/66, A/62/66/Add.2 and A/64/66/Add.2), at the eighth meeting of the Informal Consultative Process (see A/62/169), which focused its discussions on the topic, and at meetings of the Working Group (see A/61/65, A/63/79 and A/65/68). Based on discussions at those meetings, the General Assembly has

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259 See A/63/63, preamble.
260 See A/63/63, para. 54.
261 See A/65/69/Add.2, para. 135.
262 See A/65/69/Add.2, para. 87.
263 See resolution 65/37, preamble and para. 82 and A/63/63, paras. 39 to 160.
264 See resolution 65/37, para. 95-101; A/64/66/Add.1, paras. 108-110 and 129.
265 Resolution 65/37, paras. 86, 89, 97, 98, 101, 105 and 117-119.
267 Johannesburg Plan of Implementation (see note 9 above), para. 44 (o), (p) and (q).
continuously recognized, in its annual resolutions since 2007 on oceans and the law of the sea, the abundance and diversity of marine genetic resources and their value in terms of the benefits, goods and services they can provide, and the importance of research on marine genetic resources for the purpose of enhancing the scientific understanding, potential use and application, and enhanced management of marine ecosystems.\(^{268}\)

330. A number of forums, within their respective mandates, are considering the topic of genetic resources. Besides the General Assembly and its subsidiary bodies, they include the Convention on Biological Diversity, FAO, through its Commission on Genetic Resources for Food and Agriculture, and WIPO, through its Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. The United Nations University Institute of Advanced Studies, including in cooperation with UNESCO, has sought to inform the policy discussions by the publication of reports on that issue and a web-based information resource on bioprospecting.\(^{269}\) The annual reports of the Secretary-General continue to provide information on developments within those forums.

331. The issue of marine genetic resources is not only an emerging issue, having started to be considered by various forums relatively recently, but it also presents a number of challenges, in particular as regards marine genetic resources beyond areas of national jurisdiction. Those challenges are of a scientific, technical, environmental and legal nature. For example, it is generally thought that much still remains to be discovered and understood regarding the functions and role of marine genetic resources in ecological processes. Further marine scientific research is therefore needed. Capacity to sample, analyse and exploit genetic resources, albeit expanding, including in the developing world, is still largely the privilege of a few States and research institutions. Capacity-building and/or development is therefore also required both in terms of human resources and equipment and infrastructure. Limited availability of information on the sampling effort, including the location and purpose of such sampling, is also a challenging factor that impedes informed decision-making, as is the lack of information on the terms of public-private partnerships. A number of studies have been proposed, but still to be undertaken, to facilitate coordination by States of the issue of marine genetic resources beyond areas of national jurisdiction; they are set out in the outcomes of the Working Group (A/61/65, A/63/79 and A/65/68).

332. The legal regime for marine genetic resources beyond areas of national jurisdiction continues to be the subject of different views. The General Assembly has consistently noted the discussion on the relevant legal regime on marine genetic resources in areas beyond national jurisdiction in accordance with the Convention, and called upon States to further consider that issue in the context of the mandate of the Working Group, taking into account the views of States on Parts VII and IX of the Convention, with the view to making further progress on the issue.\(^{270}\)

\(^{268}\) See resolutions 62/215, 63/311, 64/71 and 65/37.

\(^{269}\) See www.bioprospector.org/bioprospector/

\(^{270}\) Resolution 65/37, para. 165. See also A/62/66, paras. 188-233. For the different views held on the applicable legal regime, see A/62/66/Add.2, paras. 275-277; A/61/65; A/63/79 and A/65/68.

2. Coral reefs management

333. Agenda 21, in its paragraph 17.86, recognized the need to identify and protect marine ecosystems exhibiting high levels of biodiversity and productivity, such as coral reefs ecosystems. Further to that, the Johannesburg Plan of Implementation, in its paragraph 32 (d), called for the development of national, regional and international programmes for halting the loss of marine biodiversity, including in coral reefs. In its paragraph 32 (e), it also called for the implementation of the programme of action by the International Coral Reef Initiative\(^{271}\) to strengthen joint management plans and international networking for wetland ecosystems in coastal zones, including coral reefs.

334. A recent study\(^{272}\) found that approximately 75 per cent of the world’s coral reefs are rated as threatened from either local threats or the effects of climate change. Agenda 21 accorded a high priority for protection to coral reefs and associated systems; however, there are an estimated 2,679 coral reef protected areas worldwide, which constitutes approximately 27 per cent of the world’s coral reefs. It is important to add that it is widely agreed that not all marine protected areas are effective in reducing human threats or impacts to coral reefs. High concentrations of carbon dioxide, thermal stress and the rising acidity of oceans\(^{273}\) add another important dimension to the challenge since, unlike other threats, damage to reefs from climate change cannot be prevented by any direct management intervention. In that sense, the General Assembly, by its resolution 65/37, has encouraged States to improve management strategies for reefs to support their natural resilience and enhance their ability to withstand pressures, such as ocean acidification.

335. By the same resolution, the General Assembly has also emphasized the need to mainstream sustainable coral reef management into national development strategies and the activities of relevant United Nations agencies and programmes, international financial institutions and the donor community. In that context, several organizations have dealt with coral reefs within their respective mandates, such as the secretariats of the Convention on Biological Diversity, the CITES and the Ramsar Convention. The challenge from Agenda 21, the Johannesburg Plan of Implementation and relevant resolutions of the General Assembly remains the use of integrated coastal planning focused on sustainable development and area-based management tools for the protection of coral reefs worldwide.

336. A number of organizations have addressed coral reefs management in the context of their respective mandates. For example, the Conference of the Parties to the Convention on Biological Diversity, by its decision VII/5, adopted an elaborated programme of work on marine and coastal biodiversity that included a list of suggested activities to address physical degradation and destruction of coral reefs, including a workplan on coral bleaching. Under the Convention on International Trade in Endangered Species, 2,019 species of corals have been listed on Appendix II of the Convention, which records species that are not necessarily threatened with extinction but that may become so unless trade is closely controlled. The work of the International Coral Reef Initiative, in the context of its Framework for Action\(^{274}\)
and Renewed Call to Action has provided the basis for the conduct of regional workshops to define regional needs and priorities and to catalyse the development of national coral reef initiatives.

To date, according to Reefs at Risk Revised (see para. 334), there are an estimated 2,679 coral reef protected areas worldwide, covering approximately 27 per cent of the world’s coral reefs. However, challenges remain in the effective protection and sustainable management of corals. For example, as a result of various factors, including lack of enforcement of the management framework, not all marine protected areas are effective in reducing human threats or impacts to coral reefs, such as watershed pollution, marine pollution and destructive fishing practices.

According to Climate Carbon and Coral Reefs (see para. 334), high concentrations of carbon dioxide, thermal stress and increasing ocean acidification add another important dimension to the challenge of protecting coral reefs worldwide. Unlike other pressures caused by human activities, damage to reefs from climate change cannot be prevented by any direct management intervention, as their effects are not caused by a direct action on a specific reef but by the cumulative effect of global activities such as greenhouse emissions.

In order to sustainably manage coral reefs worldwide, closer attention could therefore be paid to strengthening the capacity to implement integrated management and ecosystem approaches to address the cumulative impacts of human activities and natural events and strengthen enforcement capacity.

3. Marine debris

Marine debris is both a symptom of unsustainable development practices and a challenge for achieving sustainable development. Its presence in the oceans is a result of anthropogenic activities both on land and at sea. Sources of marine litter include waste; industrial outfalls; discharge from storm water drains; untreated municipal sewage; litter from beaches and coastal recreation areas; tourism; fishing and shipping; offshore mining and extraction; legal and illegal dumping at sea; abandoned, lost or otherwise discarded fishing gear; and natural disasters.

Every year, marine debris results in substantial economic costs and losses to individuals and communities around the world. The possible effects include: interference with shipping; danger to human health and safety; habitat destruction; impacts on aesthetics and tourism; and effects on wildlife. Pieces of litter are also potential carriers of invasive species between seas. Mostly, marine debris consists of material that degrades slowly and can therefore accumulate over time. Plastic debris in particular has recently been highlighted by UNEP as an emerging environmental issue, as a result of its potential to release persistent bioaccumulating and toxic compounds and its slow rate of degradation in the marine environment, which has been estimated in the region of hundreds of years. Particular attention also continues to be drawn to the effects of abandoned, lost or otherwise discarded fishing gear, particularly as a result of its ability to continue to fish (often referred to as “ghost fishing”) as well as its potential to become a navigational hazard at sea.

Recently, attention has been drawn to high levels of accumulation of plastics and other marine debris in high seas convergence zones, also known as “ocean gyres”. Deep-water canyons also appeared to be depositories for such material.

Marine debris is addressed both as part of the international community’s response to land-based sources of pollution and as sea-based sources of pollution (see sect. III, C, 3). In addition, there are a number of initiatives at the global, regional and national levels that specifically address marine debris. For example, UNEP’s Global Initiative on Marine Litter fosters the establishment of partnerships and cooperation and the coordination of activities for the control and sustainable management of marine litter. At the regional level, the Regional Seas Programmes have initiated a number of activities aimed at addressing marine debris. At the Fifth International Marine Debris Conference, participants refined and endorsed by acclamation the Honolulu Commitment, which outlines 12 actions to reduce marine debris. Participants and a group of rapporteurs also worked to revise the Honolulu Strategy, a global framework strategy to prevent, reduce and manage marine debris. Other recent developments to address marine debris have been highlighted in earlier reports of the Secretary-General.

Despite those efforts, in 2009, UNEP concluded that “there is an increasingly urgent need to tackle that issue through better enforcement of national regulatory systems, expanded outreach and educational campaigns at national, regional and global levels and the employment of strong economic instruments and incentives”. The General Assembly, in paragraph 137 of resolution 65/37, urged “States to integrate the issue of marine debris into national strategies dealing with waste management in the coastal zone, ports and maritime industries, […] and to encourage the development of appropriate economic incentives to address this issue, […] and encourage[d] States to cooperate regionally and subregionally to identify potential sources and coastal and oceanic locations where marine debris aggregates, and to develop and implement joint prevention and recovery programmes for marine debris”.

Nutrient over-enrichment and eutrophication

According to a 2010 study by the Global Partnership on Nutrient Management, “[t]he international community is faced with a nutrient management challenge — how to reduce the amount of excess nutrients in the global environment, but in a way that maximizes the contribution of nutrient management to global development, food security and a low carbon society”.

Excess nutrients, such as nitrogen and phosphorous, released or carried into the marine environment, can cause substantial harm by provoking the degradation of habitats and damage to marine ecosystems. In severe cases, nutrient over-
enrichment can cause toxic algal blooms, severe oxygen depletion from the decomposition of excess organic matter, eutrophication and the creation of “dead zones” (areas of oxygen deprivation devoid of life). In 2006, UNEP estimated that there were 146 coastal dead zones, and that the number had doubled every decade since the 1960s. According to the 2010 study by the Global Partnership on Nutrient Management, 415 eutrophic and hypoxic coastal systems have been identified worldwide, including 169 identified hypoxic areas, 233 areas of concern and 13 systems in recovery. More than 90 per cent of the world’s fisheries depend in one way or another on estuarine and near-shore habitats and many of these habitats are vulnerable to the harmful effects of eutrophication and toxic algal blooms.

347. The study reports that excess nitrogen and phosphorus can come from a variety of primarily land-based sources, including agricultural run-off from fertilizers, atmospheric releases from fossil fuel combustion, sewage and industrial discharges. Some two thirds of the 120 million tons of nitrogen produced by human activities makes its way into the air, inland waterways and the coastal zone, exceeding all natural inputs. Some 20 million tons of phosphorous are mined every year and nearly half enters the world’s oceans — eight times the natural rate of input. In developing countries, an estimated 90 per cent of wastewater, a major source of excess nutrients, harmful to health and ecosystems, is discharged as untreated into waterways and coastal areas. Moreover, according to IOC in its document IOC/INF-1249, nutrient inputs to watersheds associated with agriculture, sewage and fossil fuel combustion are projected to more than double by 2050 unless technological advances and policy changes are implemented.

348. The document also reports that increased scientific understanding of the relationships between nutrient sources throughout watersheds, nutrient transport by rivers to coastal systems and the effects of that nutrient loading on the receiving coastal ecosystem is therefore critical to effective and integrated management of water resources and coastal zones. Ultimately, improved regulation of such pollution at its source-points would reduce its impact on the oceans. Nutrients are one of the categories of pollutants specifically addressed by the Global Programme of Action (see para. 160). Thus, UNEP, its Regional Seas Programme, and others are engaged in activities to address nutrient over-enrichment and eutrophication. IOC also addresses that issue, including through its programme on Harmful Algal Blooms. Page 4 of the Global Partnership on Nutrient Management study describes how it was established in 2009 to bring together Government policymakers, scientists, private sector, non-governmental organizations and United Nations agencies, with a view to communicating the nutrient management challenge and helping to build constituencies of interest and action on the issue.

5. Geo-engineering

349. Geo-engineering is an emerging umbrella issue that incorporates a number of important developing activities. Geo-engineering is at such a nascent stage that its precise definition, or the scope of activities that may be considered to be geo-engineering, continues to be deliberated upon. Generally, geo-engineering is the deliberate, large-scale alteration of the global climate system with the goal of mitigating the impacts of climate change.

350. UNESCO convened an international expert meeting on 12 November 2010 on geo-engineering science and associated governance issues which recommended two broad categories of activities: (a) solar geo-engineering, which refers to interventions that reduce the amount of solar radiation absorbed by the Earth’s climate system; and (b) carbon geo-engineering, which refers to the active removal of carbon dioxide from the atmosphere through engineered carbon dioxide scrubbers, or the enhancement of ecosystem processes. The current understanding of the Convention on Biological Diversity mirrors that definition by referring to any technology that deliberately reduces solar insolation or increases carbon sequestration from the atmosphere, on a large scale, as a form of geo-engineering. A document summarizing geo-engineering schemes has also been produced under the London Convention and its Protocol.

351. Geo-engineering activities are seen as controversial and in need of legitimate scientific research owing to a lack of information regarding the effectiveness, possible benefits and potential undesirable impacts of individual activities. Moreover, the science and governance of many geo-engineering activities is also poorly understood. Consequently, the Conference of the Parties to the Convention on Biological Diversity decided, by decision X/33 of its tenth Conference of the Parties, to guide Parties and other Governments not to engage in geo-engineering activities that may affect biodiversity until there is an adequate scientific basis on which to justify such activities and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impacts, with the exception of small-scale scientific research studies that would be conducted in a controlled setting and only if they are justified by the need to gather specific scientific data and are subject to a thorough prior assessment of the potential impacts on the environment.

352. There is a broad range of activities which may be considered to be in the realm of geo-engineering, and similarly there is no agreement on any such list, however ocean fertilization (see para. 202) is generally considered to involve such an activity. A study on other potential geo-engineering activities is contained in the UNEP 2009 Climate Change Compendium, which includes a number of highly conceptual activities. With regard to types of marine geo-engineering, IMO, for the purposes of the London Convention and Protocol, has classified two types: those involving the deposit of wastes or other matter into the ocean, and those involving the deposit of structures or devices into the ocean (IMO document LC 32/4, paras. 5-7).

286 See www.ioc-unesco.org/hab.
287 IOC contribution.
290 IMO document LC 32/4.
291 IOC contribution.
292 Ibid.
293 IOC contribution.
353. Individual geo-engineering activities, or aspects of them, are already being regulated by, or subject to discussions in, relevant organizations (see General Assembly resolution 63/111, paras. 115-116). Concerns have recently been expressed over gaps in the current regulatory framework and the Conference of the Parties to the Convention on Biological Diversity, by its decision X/33, is undertaking a study on gaps in existing regulatory mechanisms of relevance to the Convention on Biological Diversity. The existing technological and scientific challenges in geo-engineering activities have been recommended by the UNESCO expert meeting to be addressed through an international research programme created for that purpose.295

6. Ocean noise

354. Ocean noise involves the introduction of sound generated by various human activities, including commercial and non-commercial shipping, air guns used to carry out seismic surveys, sonar, underwater detonations and construction and resource extraction into the sea.296 Over the last 15 years, research has indicated that such noise has been affecting numerous species of marine mammals and fish, which depend on hearing for communicating and accomplishing other functions vital to their survival and reproduction. Impacts from ocean noise include mortalities, injuries, temporary and permanent hearing loss, disruptions in essential activities, habitat abandonment and loss of biodiversity, chronic stress, the masking of biologically important sounds and alterations in the behaviour of commercially harvested fish.297

355. Although recognized as a form of pollution, ocean noise is not yet fully addressed at the international level. Recently, however, the international community has begun to recognize the threat that ocean noise poses to marine biodiversity, encouraged further research and studies to better understand and minimize the impacts of ocean noise on marine living resources and on fishing catch rates, and begun to develop intergovernmental approaches to reducing its impacts.298

356. Various intergovernmental organizations recognize ocean noise as an increasingly important threat to biological diversity and the sustainability of marine living resources. There have been continuing calls for research, monitoring and efforts to minimize the risk of adverse effects of ocean noise.299 The General Assembly has addressed ocean noise through its annual resolutions on the law of the sea (for example, 63/111, 64/71 and 65/37) and, most recently, fisheries (65/38), urging States and intergovernmental organizations to carry out and submit studies to

295 IOC contribution.
296 See A/64/66/Add.2, para. 95.
297 See, for example, Report of the International Whaling Commission Scientific Committee, IWC/56/REP1; see also OSPAR Commission, Over the impacts of anthropogenic underwater sound in the marine environment (2009).
298 See A/59/62/Add.1, para. 220; A/60/63/Add.1, para. 159; A/62/66/Add.2, paras. 51-54; and A/64/66/Add.1, paras. 190-195; A/64/66/Add.2, paras. 96-97; Report of the International Whaling Commission Scientific Committee, IWC/62/REP1; IMO document IMO/MEPC/58/23, paras. 19.1-19.5; resolution 4.17 of the Parties to ACCOBAMS; resolutions 2 and 3 of the Parties to ASCOBANS; and OSPAR Commission, Assessment of impacts of offshore oil and gas activities in the North-East Atlantic (2009).
and research institutions, is increasingly addressing the technological and financial barriers to deployment of full-scale devices installed and operating in the oceans.\textsuperscript{305} While potentially providing renewable sources of energy, the deployment of these technologies into the marine environment may also lead to significant use conflicts and environmental harm.\textsuperscript{306}

362. In order to ensure that renewable marine energy resources contribute positively to the global clean energy revolution necessary to power sustainable development, States and the international community will need to address the significant gaps in ecological knowledge and erect the necessary regulatory frameworks at all levels.\textsuperscript{307} The Informal Consultative Process will consider marine renewable energy as the topic of focus at its thirteenth meeting in 2012.

8. Environmental data exchange

363. There are many international organizations, Governments, universities and institutions that offer oceanographic data and information free of charge. It has been noted, however, that the activity is not systematic and is at the discretion of each data holder.\textsuperscript{308} The call for the free exchange of oceanographic data, in particular environmental research, including on climate change, is driven by current environmental challenges and the need to understand and address those challenges.

364. To address the deficiency in data sharing, there have been calls for the urgent establishment of a system under a convention or other formal treaty to facilitate and oblige data holders to freely exchange data for scientific programmes and for data prevention.\textsuperscript{309}

V. Conclusions

365. Agenda 21 and the Johannesburg Plan of Implementation helped set important goals and targets for the sustainable development of the oceans and their resources, which, inter alia, have provided direction for initiatives in the field of oceans and the law of the sea over the past 19 years. Considerable progress has been achieved, particularly in the development of legal and policy frameworks, institutions and cooperation mechanisms. However, the full implementation of many of those goals and targets will require further efforts by States, intergovernmental organizations and other relevant actors.

366. The present report demonstrates that a number of milestones have been reached in the marine sector in terms of policy and institutional developments for the sustainable development of oceans and seas. The Convention provides the legal framework for all activities in the oceans with near-universal participation. Two important implementing agreements have been adopted and brought into force. The development of legal and policy frameworks and relevant implementing institutions has been a promising achievement across most, if not all, major sectors.

367. Competent international organizations have undertaken a large number of activities at the global, regional and national levels. Programmes have also been put in place to promote cooperation and coordination among States and build capacity. Technical assistance is being provided to developing States through those programmes and growing consideration is being given to the special case of small island developing States. Mechanisms of cooperation and coordination such as UN-Oceans are also contributing to an integrated overview of developments in the oceans and seas.

368. Yet, despite the efforts undertaken by the international community thus far, the negative impacts of human activities on the oceans and seas are increasingly visible. Marine pollution and unsustainable resource exploitation practices continue to endanger marine ecosystems, thereby putting at risk the potential benefits for future generations. Climate change has emerged as an important factor on many different levels, by contributing to such phenomena as ocean acidification, sea level rise and coral bleaching. It is also difficult to ignore the increase in devastating natural disasters, as recently evidenced by the tragic earthquake and tsunami in Japan, which have claimed thousands of lives and severely affected millions of others, in particular in coastal communities. Developing countries, including small island developing States in particular, are still facing the challenge of implementing and fully participating in the benefits and opportunities linked with the oceans and seas.

369. Moreover, sustainable development requires, inter alia, that the adverse impacts on the quality of air, water and other natural elements be minimized so as to sustain the ecosystem’s overall integrity.\textsuperscript{310} Marine areas beyond national jurisdiction need to be carefully managed and monitored for their health and wealth in natural resources and rich biodiversity. Such efforts could be assisted with the prompt operationalization of the regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects. That process would provide a much-needed baseline of the state of the marine environment to better inform decision-making. It is also quite clear that the ocean resources are not inexhaustible and efforts in addressing consumption patterns should also be part of the commitments of the international community for the sustainability of oceans and seas.

370. Efforts should be made to facilitate implementation of the outcomes of the major summits on sustainable development at the global, regional and especially the national level. That would require increased international and inter-agency cooperation and coordination, as well as continued efforts to build necessary capacity. Political will and the targeted allocation of sufficient resources at all levels remain key components of the way forward.

371. Today, the oceans continue to provide hope and opportunities for fostering sustainable development, poverty alleviation and the development of a “green economy”. Fisheries continue to represent an important source of employment and to provide a valuable source of food for billions of people. The oceans have an extremely rich biodiversity, including marine genetic resources, which holds untold

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\textsuperscript{307} Alain Piquemal, Renewable Marine Energies: Legal Approach in International Law and Comparative Law (2009).

\textsuperscript{308} IOC contribution.

\textsuperscript{309} Ibid.

\textsuperscript{310} See A/42/427, part 1, chap. 2, para. 14.
promise for possible applications in the industrial, pharmaceutical and therapeutic fields, among others. Recent discoveries and developments in science and technology have pushed the boundaries of our knowledge of the oceans’ processes and ecosystems. Transport by sea continues to grow and thus commercial exchanges among States have increased, providing employment opportunities to numerous seafarers and contributing to the development of nations.

372. As on previous occasions, stated actions need to take place primarily at the national level, with Governments, non-governmental organizations, the private sector and others as the main actors. The role of the United Nations system is, inter alia, to facilitate cooperation among major actors to enhance action at the national level.\[^{311}\]

\[^{311}\] A/54/131-E/1999/75, para. 43; ACC/2000/8, para. 47.
Report of the Secretary-General on oceans and the law of the sea, Addendum, A/66/70/Add.2, 29 August 2011
Sixty-sixth session
Item 76 (a) of the provisional agenda*
Oceans and the law of the sea

Report of the Secretary-General**
Addendum

Summary
The present report has been prepared pursuant to the request, made by the General Assembly in paragraph 240 of its resolution 65/37 A, that the Secretary-General prepare a comprehensive report for consideration by the General Assembly at its sixty-sixth session, on developments and issues relating to ocean affairs and the law of the sea, including the implementation of the resolution. It is also being submitted to States parties to the United Nations Convention on the Law of the Sea, pursuant to article 319 of the Convention.

* A/66/150
** Owing to the page limit, the present report contains a mere summary of the most important recent developments and selected parts of contributions by relevant agencies, programmes and bodies.
A/66/70/Add.2

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I. Introduction

1. The present report provides an overview of developments in ocean affairs and the law of the sea. Its purpose is to assist the General Assembly in its annual review of the implementation of the United Nations Convention on the Law of the Sea and other developments related to ocean affairs and the law of the sea. It should be read in conjunction with: (a) the first part of the report of the Secretary-General related to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (A/66/70); (b) the addendum to the report (A/66/70/Add.1), which addressed the topic of focus at the twelfth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea; (c) the two reports on the work of the Ad Hoc Working Group of the Whole to recommend a course of action on the regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects (A/65/759 and A/66/189); (d) the report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its twelfth meeting (A/66/186); (e) the letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction addressed to the President of the General Assembly (A/66/119); and (f) the report of the twenty-first Meeting of States Parties to the Convention (SPLOS/231).


A. Status of the Convention and its implementing agreements

2. As at 31 August 2011, there were 162 parties to the Convention, including the European Union, as a result of its ratification by Malawi on 28 September 2010 and Thailand on 15 May 2011. On those dates, both States also expressed their consent to be bound by the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. This action, together with the accession to the Convention by Angola on 7 September 2010, brought the number of parties to that Agreement to 141. The number of parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations Fish Stocks Agreement) rose to 78 as a result of accession by Saint Vincent and the Grenadines on 29 October 2010. Upon ratification of the Convention, Thailand made declarations under articles 310 and 298 of the Convention.

B. Meeting of States Parties

3. The twenty-first Meeting of States Parties was held from 13 to 17 June 2011. At the Meeting, States parties took note of a number of reports relating to the International Tribunal for the Law of the Sea and of the information reported on the International Seabed Authority and on the Commission on the Limits of the Continental Shelf. States parties also elected seven judges to the Tribunal and adopted a decision on the workload of the Commission.

III. Maritime space

A. Overview of recent developments regarding State practice, maritime claims and the delimitation of maritime zones

4. During the reporting period, the Secretariat received from Member States the following national legislation acts: (a) the Decree of 10 June 2010 determining the outer limit of the exclusive economic zone of the part of the Kingdom of the Netherlands situated in the Caribbean; (b) Resolution 478-08 of the National Congress of the Dominican Republic adopting the Convention, and the interpretative declarations authorized by article 310 of the Convention; (c) Maritime Zones Act 18 of 2010 of Guyana; (d) Decrease No. 78-147 of the Prime Minister of France dated 3 February 1978, establishing, pursuant to the Law of 16 July 1976, an economic zone off the coast of Île Clipperton; (e) Presidential Decrese No. 450 of Ecuador concerning the publication of ministerial agreement 0081 of 12 July 2010 and Nautical Chart IOA 42, annexed thereto, which plots the maritime boundary between Ecuador and Peru and the outer maritime boundary — southern segment — of Ecuador; (f) the list of geographical coordinates for the delimitation of the northern limit of the territorial sea and exclusive economic zone of the State of Israel, July 2011; and (g) geographical coordinates of the 6 nautical mile, 12 nautical mile, 24 nautical mile and 200 nautical mile limits defining the maritime zones of Liberia.

5. During the same period, the Secretariat registered the following maritime boundary delimitation agreements pursuant to Article 102 of the Charter of the United Nations: (a) the Treaty between the Republic of Trinidad and Tobago and Grenada on the Delimitation of Marine and Submarine Areas, 21 April 2010; (b) the Agreement on the delimitation of the maritime boundaries in the Gulf of Aqaba between the Kingdom of Saudi Arabia and the Hashemite Kingdom of Jordan, 16 December 2007; (c) the Treaty between the Republic of Singapore and the Republic of Indonesia relating to the Delimitation of the Territorial Seas of the Two Countries in the Western Part of the Strait of Singapore, 10 March 2009; (d) the Agreement between the Government of the State of Israel and the Government of the Republic of Cyprus on the Delimitation of the Exclusive Economic Zone, 17 December 2010; and (e) the Agreement by exchange of notes of identical content between the Republic of Peru and the Republic of Ecuador, 2 May 2011.

6. The Secretariat also received a number of communications from States, namely a communication dated 25 January 2011 from Saudi Arabia and Kuwait concerning exploration and exploitation work by the Islamic Republic of Iran of petroleum and gas in a maritime area that stretches to the submerged area adjacent to the zone divided between Saudi Arabia and Kuwait; and a communication dated 20 June 2011 concerning the exclusive economic zone of Lebanon and the Agreement between Israel and Cyprus on the delimitation of their respective exclusive economic zones.

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1 See report of the twenty-first Meeting of States Parties (SPLOS/231).
2 SPLOS/229, para. 1.
7. Information on these and other developments, as well as the texts of national legislation acts, maritime boundary delimitation treaties and relevant communications received by the Secretariat, have been published in the Law of the Sea Bulletin, Nos. 74 to 76. The information is also available on the website of the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs.

B. Deposit and due publicity

8. On 7 September 2010, the Comoros deposited with the Secretary-General, pursuant to article 47 (9) of the Convention, a list of geographical coordinates of points defining the archipelagic baselines of the Comoros.

9. On 20 October 2010, Lebanon deposited, pursuant to article 75 (2) of the Convention, charts and a list of geographical coordinates of points defining the Southern part of the Western maritime limit of Lebanon’s exclusive economic zone.

10. On 30 November 2010, France deposited, pursuant to article 75 (2) of the Convention, lists of geographical coordinates of points defining the outer limits of the exclusive economic zone of Clipperton Island. On 28 January 2011, France also deposited, pursuant to articles 16 (2) and 75 (2) of the Convention, three charts showing the baselines, the outer limits of the territorial sea and the outer limits of the exclusive economic zone of New Caledonia.

11. On 15 April 2011, Iraq deposited, pursuant to article 16 (2) of the Convention, a list of geographical coordinates of points defining the baseline of the territorial sea of the Republic of Iraq.

12. On 30 June 2011, Latvia deposited charts showing the baselines and the outer limits of the territorial sea of Latvia, including the lines of delimitation, as well as a list of geographical coordinates of points defining the baselines of Latvia.

13. The Secretariat also received a number of communications relating to the above-referenced deposits, namely, a communication from Egypt dated 15 September 2010 concerning the deposit by Saudi Arabia; a communication from France dated 6 December 2010 concerning the deposit by Vanuatu; a communication from the Islamic Republic of Iran dated 22 December 2010 concerning the deposit by Saudi Arabia of a list of geographical coordinates of points; two communications from Mauritius dated 17 May 2011 concerning both the deposits by France of a list of geographical coordinates of points and a communication from France dated 30 July 2009 in relation to the deposit by Mauritius of charts and lists of geographical coordinates of points; and a communication from Saudi Arabia dated 15 June 2011 in relation to the communication from the United Arab Emirates dated 5 May 2010.

C. Commission on the Limits of the Continental Shelf

14. Submissions and the work of the Commission. During the reporting period, the Commission received three new submissions: one from Denmark in respect of the Faroe-Rockall Plateau Region, one from Bangladesh and one from Madagascar, bringing the total number of submissions received to date to 56. It also received a revised submission from Barbados.

15. The Commission held its resumed twenty-sixth session from 15 November to 10 December 2010, its twenty-seventh session from 7 March to 21 April 2011 and its resumed twenty-seventh session from 6 to 17 June 2011. At the time of the preparation of the present report, the twenty-eighth session (1 August-9 September 2011) was still under way.

16. During the plenary part of the twenty-seventh session, the Commission received formal presentations of submissions by Mozambique, Maldives and Denmark in respect of the Faroe-Rockall Plateau Region. The Commission considered and adopted recommendations in respect of the submission made by Indonesia in respect of North-West of Sumatra Island; the joint submission made by Mauritius and Seychelles in respect of the Mascarene Plateau; and the submission made by Suriname.

17. The Commission continued the examination, by way of subcommissions, of the submission made by Japan and of the submission made by France in respect of the French Antilles and the Kerguelen Islands. It also established new subcommissions to consider the submissions made by Uruguay and the Philippines in respect of the Benham Rise region.

18. Workload of the Commission. During its twenty-seventh session, the Commission met with the informal working group of the Meeting of States Parties on the workload of the Commission in response to a letter from its Coordinator, Mr. Eden Charles (Trinidad and Tobago). The Commission presented its views on a number of possible measures, described in the letter of the Coordinator, to address the workload of the Commission. These measures included working at United Nations Headquarters on a full-time basis or working for six months per year, organized in the manner that, in the view of the Commission, would be most effective. The Commission also presented its views on the impact of measures listed in paragraphs 1 (a) to (f) of the decision contained in document SPLOS/216.

19. By-elections. On 11 August 2011, at a special meeting of the States parties to the Convention, Mr. Tetsuro Urabe (Japan) was elected to fill the vacancy that had

4 Ibid., para. 27.
5 A/64/66/Add.1, para. 34.
6 A/63/63/Add.1, para. 21.
7 More information on the Commission on the Limits of the Continental Shelf, including its documents, the submissions received and the recommendations issued, are available from www.un.org/Depts/los/clcs_new/clcs_home.htm.
8 Details on all submissions received by the Commission and on preliminary information are available from www.un.org/Depts/los/clcs_new/commission_submissions.htm and www.un.org/Depts/los/clcs_new/commission_preliminary.htm, respectively.
9 More details on the sessions of the Commission are contained in document CLCS/70.
occurred owing to the death of Mr. Kensaku Tamaki (Japan). Mr. Urabe was elected for the remainder of Mr. Tamaki’s term, which will end on 15 June 2012.  

D. Geographic Information System facilities

20. The Division continued its efforts to maintain and improve its Geographic Information System services in the context of its support for the Commission as well as in the performance of the depositary functions of the Secretary-General under the Convention in relation to charts and lists of geographical coordinates of points. In particular, it continued to upgrade its internal Geographic Information System catalogue to permit the eventual dissemination of deposited information and improve its accuracy, including by ascertaining the datum used in certain deposits.  

IV. Bodies established by the United Nations Convention on the Law of the Sea

A. International Seabed Authority

21. The Assembly of the International Seabed Authority held its seventeenth session in Kingston in July 2011. The members of the Authority examined the report of its Secretary-General (ISBA/17/A/2).  

22. At the session, it was decided that preparations should begin with regard to the formulation of a mining code for exploitation of deep-sea minerals in the international seabed Area.  

23. The Assembly endorsed the election by the Council of the Authority of 25 members to serve on the Legal and Technical Commission. It also elected 15 members to the Finance Committee;\textsuperscript{16} Malawi and Thailand were welcomed as the Authority’s newest members.  

24. The Assembly adopted a decision relating to financial and budgetary matters\textsuperscript{17} by which members of the Authority were urged to pay their assessed contributions to the budget on time and in full and to pay arrears from previous periods (1998-2010) as soon as possible. By the same decision, PricewaterhouseCoopers was appointed as independent auditor for another two years, 2011 and 2012. The auditors were requested to express, in future reports, an opinion on the effectiveness of the internal controls of the Authority.  

25. The Assembly also adopted the decisions of the Council,\textsuperscript{18} including with regard to approval of the applications of four entities for a plan of work to explore marine minerals in the international seabed Area.  

26. In relation to environmental reporting to the Legal and Technical Commission by future contractors, the Assembly adopted the decision of the Council calling upon all contractors to provide raw data\textsuperscript{19} associated with resource assessment and environmental baseline studies to the Authority. In the same decision, the Council also requested the Secretary-General to prepare a report on the laws, regulations and administrative measures adopted by sponsoring States and other members of the Authority with respect to activities in the Area, and to provide to the Authority information on, or texts of, relevant laws, regulations and administrative measures.  

27. The Assembly approved the decision of the Council relating to an environmental management plan for the Clarion-Clipperton Fracture Zone.\textsuperscript{20} It also took note of the advisory opinion of the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea on responsibilities and obligations of States sponsoring persons or entities with respect to activities in the Area.\textsuperscript{21} The eighteenth session of the Authority will be held in Kingston from 16 to 27 July 2012.  

B. International Tribunal for the Law of the Sea

28. The information on major developments in the work of the Tribunal\textsuperscript{22} is provided in section XIII of the present report, entitled “Settlement of disputes”.  

V. Developments relating to international shipping activities

A. Economics of shipping

29. According to the United Nations Conference on Trade and Development (UNCTAD), in tandem with the decline in economic growth and trade, volumes of international seaborne trade contracted by 4.5 per cent in 2009. Recovery took place in 2010, and, in the absence of further upheavals at the global level, losses in 2009 were expected to be recovered in 2011 and beyond.\textsuperscript{23}  

30. By the beginning of 2010, the world merchant fleet had reached 1.276 billion deadweight tons, representing an increase of 7 per cent compared with 2009. This growth resulted from a record in new deliveries of 117 million deadweight tons, or an increase of 42 per cent compared with 2008, owing to the ordering of ships prior to the downturn in demand. The resulting oversupply of tonnage led to a surge in

\textsuperscript{11} See report of the Meeting of States Parties to elect one member of the Commission on the Limits of the Continental Shelf (SPLOS/237).  

\textsuperscript{12} On a number of occasions, it has been brought to the attention of States parties that the preferred reference system for the deposit the list of geographical points is WGS 84.  

\textsuperscript{13} See ISBA/17/C/21 and 22.  

\textsuperscript{14} See ISBA/17/A/L.3.  

\textsuperscript{15} See ISBA/17/C/2 and ISBA/17/C/4 and Add.1.  

\textsuperscript{16} See ISBA/17/A/3-ISBA/17/C/3, ISBA/17/A/4 and Add.1.  

\textsuperscript{17} See ISBA/17/C/18 and ISBA/17/A/3-ISBA/17/C/3.  

\textsuperscript{18} The Council was unable to complete its work on the third set of regulations for cobalt-rich ferromanganese crusts, which will be taken up again at the eighteenth session, in 2012.  

\textsuperscript{19} See ISBA/17/C/9, 30, 11, 13 and 21; see also ISBA/17/C/5 and 7.  

\textsuperscript{20} See ISBA/17/C/20.  

\textsuperscript{21} See ISBA/17/C/19.  

\textsuperscript{22} See ISBA/17/C/6-ISBA/17/LTC/5.  

\textsuperscript{23} See also the press releases of the Tribunal issued as ITLOS/Press 137, 138, 144 and 145.  

\textsuperscript{24} See Review of Maritime Transport 2010 (UNCTAD).
demolitions of older tonnage of more than 300 per cent (33 million deadweight tons). 34

31. In terms of productivity, UNCTAD estimated that the global average volume of cargo in tons per carrying capacity deadweight tons had decreased. In 2009, the market was particularly difficult for container shipping, as demand fell by 9 per cent, while supply continued to grow, by 5.1 per cent. However, the resumption of manufacturing activity and global trade in containerized goods led to a recovery of demand for liner shipping services in early 2010. 35

32. According to UNCTAD, by the end of 2009, freight rates in all sectors had recovered from earlier lows, although they were still significantly lower than 2008 levels. Freight rates for 2010 and beyond remained uncertain, as doubts surrounded the recovery from the global economic crisis. In the tanker and liner sectors, freight rates were boosted by absorbing supply rather than by an increase in demand. 36

B. Safety of navigation

1. Safety of ships

33. At its eighty-eighth session, held from 24 November to 3 December 2010, the Maritime Safety Committee of the International Maritime Organization (IMO) recognized that the continual development of materials for use in the construction of ships and improvement of marine safety standards necessitated the revision of fire test procedures to maintain the highest practical level of safety. 37 The Committee adopted amendments to the International Convention for the Safety of Life at Sea that made mandatory the 2010 International Code for Application of Fire Test Procedures (2010 FTP Code). 38 The new 2010 FTP Code, also adopted at the same session, replaced the 1996 FTP Code and provided the international requirements for laboratory testing, type approval and fire test procedures for products referenced under Chapter II.2 of the Convention. 39 The 2010 Fire Test Procedures Code was expected to enter into force on 1 July 2012. 40

34. The Maritime Safety Committee also adopted amendments to the 1972 International Convention for Safe Containers, including new specifications on approved examination programmes, 41 and a new chapter 9, on fixed fire detection and fire alarm systems for the International Code for Fire Safety Systems. 42 In addition, the Committee approved a revised resolution on the principles of safe manning and amendments to the International Convention for Safety of Life at Sea relating to mandatory requirements for determining safe manning, with a view to their adoption in 2012. 43

35. At its eighty-ninth session, held in May 2011, the Maritime Safety Committee adopted amendments to the International Convention for Safety of Life at Sea concerning the replacement of lifeboat on-load release mechanisms not in compliance with the new International Life-Saving Appliance Code. The amendments were intended to establish stricter safety standards for lifeboat release and retrieval systems, aimed at preventing accidents during lifeboat launching, and were expected to enter into force on 1 January 2013. 44

36. In view of the fact that the 1993 Torremolinos Protocol relating to the 1977 Torremolinos International Convention for the Safety of Fishing Vessels had not yet entered into force, 45 the Committee also agreed on a draft agreement on the implementation of the Protocol in order to achieve the entry into force of the technical provisions on fishing vessel safety (see para. 57 below). 46

37. The Maritime Safety Committee also approved the Guidelines to Assist Competent Authorities in the Implementation of Part B of the Code of Safety for Fishermen and Fishing Vessels, the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, and the Safety Recommendations for Decked Fishing Vessels of Less than 12 Metres in Length and Undecked Fishing Vessels, and requested the IMO secretariat to forward them to the Food and Agriculture Organization of the United Nations (FAO) and the International Labour Organization (ILO) for concurrent approval, as appropriate. 47

38. Also at its eighty-ninth session, the Committee approved a number of important instruments for submission to the IMO Assembly in November 2011 for adoption, including draft revised procedures for port State control, which were intended to provide basic guidance on the conduct of port State control inspections and afford consistency in the conduct of inspections, the recognition of deficiencies of a ship, its equipment or its crew, and the application of control procedures. 48 The Committee also approved a new draft International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers. 49

2. Transport of dangerous goods

39. At the fifty-fourth regular session of the General Conference of the International Atomic Energy Agency (IAEA), in September 2010, measures were adopted to strengthen international cooperation regarding nuclear, radiation, transport and waste safety. In relation to the safety of the maritime transport of radioactive material, IAEA emphasized the importance of maintaining dialogue and

25 Ibid.
26 Ibid.
27 Ibid.
28 See resolution MSC.307(88).
29 See resolution MSC.308(88).
30 See resolution MSC.307(88).
31 See resolution MSC.308(88), annex, regulation 1.
32 MSC 88/26, paras. 3.46; see also resolution MSC.310(88).
33 MSC 88/26, paras. 3.54-3.55; see also resolution MSC.311(88).
34 MSC 88/26, paras. 11.18-11.21; MSC 88/26/Add.1, annexes 17 and 18.
35 MSC 89/25, paras. 3.37-3.38; see also resolution MSC.317(89).
36 The Protocol requires signature without reservation as to ratification, acceptance, or approval or deposit of instruments of ratification, acceptance, approval or accession of no fewer than 15 States, the aggregate number of whose fishing vessels of 24 metres in length and over is no fewer than 14,000. As at 1 August 2011, the Protocol had 17 contracting States, with an aggregate number of fishing vessels of 24 metres in length and over of approximately 3,237. See www.imo.org/AboutConventions/StatusOfConventions/Documents/Status%20-%202011.pdf.
37 MSC 89/25, paras. 9.15-9.26 and 9.36-9.38; see also MSC 89/25/Add.1, annex 18.
38 See MSC 89/25, para. 9.3.
40 See MSC 89/25/Add.2, annex 14.
consultation aimed at improving mutual understanding, confidence-building and enhanced communication between shipping States and coastal States. 41

40. With regard to the denial and delay of shipments of radioactive materials, IAEA noted the development of an action plan on denials and urged the Secretariat to actively facilitate its implementation. 42 IAEA also called upon its member States to nominate a national focal point on denials of the shipment of radioactive material, and welcomed the creation of regional action plans and networks to address key issues. In addition, IAEA renewed appeals to its member States to facilitate the transport of such radioactive material when carried out in compliance with its transport regulations. 43

3. Safe routes for international navigation and long-range identification and tracking of vessels

41. Ship routing and reporting systems. At its eighty-eighth session, the Maritime Safety Committee adopted a new mandatory ship reporting system in the Sound between Denmark and Sweden, 44 as well as amendments to the existing mandatory ship reporting systems in the Torres Strait region and the Inner Route of the Great Barrier Reef 45 and off the South and South-West coast of Iceland. 46 It also adopted a number of new and amended traffic separation schemes, 47 as well as routing measures other than traffic separation schemes. 48 Furthermore, the Committee decided that these schemes should be implemented effective 1 June 2011. 49

42. Safety zones around artificial islands, installations and structures in the exclusive economic zone. At its eighty-eighth session, the Maritime Safety Committee approved a safety-of-navigation circular on guidelines for safety zones and safety of navigation around offshore installations and structures that had been developed by the IMO Subcommittee on Safety of Navigation at its fifty-sixth session, in July 2010. 50 The Subcommittee considered that there was no demonstrated need to establish safety zones larger than 500 metres around artificial islands, installations and structures or to develop guidelines to do so, and that continuation of the work beyond 2010 was no longer necessary. 51

43. Long-range identification and tracking. Further progress was made by IMO in the establishment of the long-range identification and tracking system. 52 As at 6 May 2011, 64 data centres were operating in the production environment of the system, providing services to 93 contracting Governments to the International Convention for Safety of Life at Sea, and another 10 data centres were undergoing developmental or integration testing or had not yet requested to start testing. 53 The Committee urged the contracting Governments that were in the process of establishing data centres to complete developmental and integration testing and to become part of the production environment of the system as soon as possible. Progress was made on the transfer of operations of the international long-range identification and tracking data exchange from its production environment in the United States of America to the European Maritime Safety Agency in Portugal, and agreement was reached on the operation of the data exchange. 54

4. Hydrographic surveying and nautical charting

44. At its fifty-seventh session, held from 6 to 10 June 2011, the IMO Subcommittee on Safety of Navigation noted that, for only 6 of the 154 States with coastlines, and for the coastline of Antarctica, five or more electronic nautical charts remained to be produced in order to match corresponding paper chart coverage at the medium scale. In addition, with respect to the world’s top 800 ports in terms of total tonnage, only eight coastal States had yet to produce electronic nautical charts that matched the coverage provided by paper charts of those ports. 55 Following a grounding incident, one of the main causes of which had been faulty updating of electronic nautical charts and paper charts, the attention of the Subcommittee was drawn to the need to ensure consistent updating of electronic nautical charts and paper charts. 56

45. The Subcommittee noted with interest that the Arctic coastal States had established the Arctic Regional Hydrographic Commission in October 2010, which aimed to facilitate regional cooperation with respect to hydrographic surveys, the production of nautical charts, capacity-building and technical cooperation. 57 Prior to the launching of this initiative, the Arctic had been a major part of the world oceans not covered by a regional hydrographic commission. 58

C. Implementation and enforcement

46. States can fully realize the benefits of becoming parties to instruments aimed at promoting maritime safety, security and the prevention of pollution from ships only when all parties carry out their obligations under the instruments. In this

41. IAEA General Conference resolution entitled “Measures to strengthen international cooperation in nuclear, radiation, transport and waste safety” (GC(54)/RES(7)), para. 36.
42. Ibid., para. 42.
43. Ibid.
44. MSC 88/26, para. 11.6; see also resolution MSC.314(88).
45. MSC 88/26, para. 11.6; see also resolution MSC.315(88).
46. MSC 88/26, para. 11.6; see also resolution MSC.316(88).
47. MSC 88/26, paras. 11.2-11.3; see also MSC 88/26/Add.1, annex 11.
48. MSC 88/26, para. 11.4; see also MSC 88/26/Add.1, annex 12.
49. MSC 88/26, para. 11.5.
50. MSC 88/26, paras. 11.8-11.9; see also SN.1/Circ.295.
51. NAV 56/20, para. 4.15. Article 60(5) of the United Nations Convention on the Law of the Sea provides that safety zones around artificial islands, installations and structures in the exclusive economic zone shall not exceed a distance of 500 metres, except as authorized under generally accepted international standards or as recommended by the competent international organization.

52. In accordance with regulation V/19-1 of the International Convention for the Safety of Life at Sea, ships constructed on or after 31 December 2008 shall be equipped with a system to automatically transmit long-range identification and tracking information and ships constructed before 31 December 2008 shall transmit such information not later than the first survey of the radio installation after 31 December 2008.
53. MSC 89/25, para. 6.6.
54. Ibid., paras. 6.12-6.17; see also resolution MSC.322(89).
55. NAV 57/15, para. 6.12.
56. Ibid., para. 14.49.
57. Ibid., para. 14.7.
58. NAV 57/INF.3, para. 3.
E. Wreck removal

51. The 2007 Nairobi International Convention on the Removal of Wrecks has not yet entered into force.\(^{67}\) At its ninety-eighth session, in April 2011, the IMO Legal Committee approved a draft resolution for submission to the IMO Assembly on the issuance of wreck removal certificates to bareboat-registered vessels, which recommended that such certificates be issued by the flag State. This measure is intended to assist States in ratifying the Convention by, inter alia, removing ambiguity regarding the issuance of wreck removal certificates to bareboat-registered vessels.\(^{68}\)

VI. People at sea

A. Seafarers and fishers

1. Seafarers

52. At its ninety-eighth session, the IMO Legal Committee agreed on a draft Assembly resolution (LEG 98/14, annex 2), aimed at promoting compliance with the 2006 IMO/ILO Guidelines on the Fair Treatment of Seafarers in the event of a Maritime Accident.\(^{69}\)

53. As at July 2011, the 2006 Maritime Labour Convention had received 15 ratifications, representing more than 50 per cent of the world gross tonnage of ships.\(^{70}\) Once the 2010 Standards of Training Certification and Watchkeeping for Seafarers amendments adopted in Manila come into force in January 2012, several aspects of the Convention will already have become mandatory for seafarers covered by the Standards.

54. In order to facilitate the ratification, entry into force and subsequent implementation of the Convention, ILO conducts capacity-building activities in the form of training workshops. It also seeks, through its Maritime Labour Academy, to build legislative drafting capacity by developing model provisions and guidance on the more complex or newer provisions of the Convention, namely, the provisions on occupational safety and health and on social security.\(^{71}\)

55. ILO held consultations on the Seafarers’ Identity Documents Convention (Revised), 2003 (No. 185), in September 2010. The purpose of the consultations was to discuss challenges to the implementation of the Convention and ways of allowing for the achievement of its objectives.\(^{72}\)

D. Maritime casualties and incidents

50. At its eighty-eighth session, the Maritime Safety Committee recognized the importance of better utilization of the Global Integrated Shipping Information System database for analysing shipping accidents, and reiterated its invitation to IMO member States to provide details of their investigation reports to IMO.\(^{65}\) It also instructed the IMO Subcommittee on Flag State Implementation to consider how the collection of accident investigation data by IMO could be improved.\(^{66}\)

56. See FSI 19/19/Add.1, annex 8.
57. MSC 89/25, para. 12.12-12.18; see also MSC 89/25/Add.3, annex 26.
58. MSC 89/25, para. 12.8.
59. See report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24).
61. See, for example, www.parismou.org; see also IMO progress report on the current status of regional port State control agreements (FSI 19/6/2).
63. Ibid.
64. See http://mlc-training.icilo.org/training-courses.
67. See www.imo.org/MediaCentre/PressBriefings/Pages/20-LEG-98.aspx.
68. See www.ilc.org/iloex.cgi-kb/ratificp1?C186.
56. The IMO Secretary-General, in an open letter issued on 11 February 2011, reviewed the achievements accomplished under the theme of the 2010 World Maritime Day, “2010: year of the seafarer”, including increased public awareness of seafarers and their work. On 25 June 2011, IMO observed the first “Day of the Seafarer”.

2. Fishers

57. The IMO Council, at its session held from 27 June to 1 July 2011, adopted a decision to convene a diplomatic conference in South Africa in 2012, for the purpose of adopting an agreement on the implementation of the 1993 Protocol relating to the 1977 Torremolinos International Convention for the Safety of Fishing Vessels. The agreement would amend the technical provisions of the 1993 Protocol.

58. The Governing Body of the International Labour Office requested the ILO Director-General to publish the guidelines, adopted in February 2010, for port State control officers carrying out inspections under the 2007 Work in Fishing Convention (No. 188).

59. FAO, ILO and IMO have long cooperated with regard to the safety of fishers and fishing vessels (see para. 37 above).

B. International migration by sea

60. While it remains difficult to establish precise figures, the Office of the United Nations High Commissioner for Refugees (UNHCR) provided the following information concerning the number of arrivals of people seeking to migrate by sea through irregular means in 2010: 1,765 to Greece from Turkey, with 41 individuals reported dead or missing; 4,348 to Italy from North Africa, Greece and Turkey, with 8 reported dead or missing; 28 to Malta from North Africa; and 3,632 to Spain from North and West Africa, with 74 reported dead or missing. IMO indicates that in 2010, a total of 86 incidents related to unsafe practices associated with the trafficking or transport of migrants by sea, involving 2,376 migrants, were reported. Those migrants came from the Middle East (1,233), Asia (586), Africa (414), and Europe (34).

61. In the first few months of 2011, UNHCR noted that developments in North Africa had led to the movement of hundreds of thousands of people to neighbouring countries and also across the Mediterranean, often in unseaworthy vessels. Its statistics indicate that, to date, 14,000 people have arrived in Italy and Malta by boat from Libya. UNHCR and the IMO Secretary-General expressed concern about the high number of casualties in the Mediterranean Sea and urged States to strengthen the rescue-at-sea regime in the Mediterranean through early initiation of search-and-rescue operations, better coordination and information-sharing.

62. In March 2011, complete search-and-rescue coverage around Africa’s coast was established with the signing of an ad hoc multilateral cooperation agreement on the North and West African subregional Maritime Rescue Coordination Centre. The agreement establishes a new Maritime Rescue Coordination Centre near Rabat, with associated sub-centres.

63. Following this development, the Maritime Safety Committee, at its eighty-ninth session, approved the development of a technical cooperation project aimed at the establishment of two regional Maritime Rescue Coordination Centres and five associated sub-centres in Central America for search-and-rescue coordination purposes.

64. Stowaways: According to the IMO annual report on stowaways, 253 incidents, involving 721 stowaways, occurred in 2010. The statistics indicate that 136 stowaways embarked from the Mediterranean, the Black Sea and the North Sea region; 63 from West African countries; 25 from North and South America and the Caribbean region; and 12 from the Indian Ocean and East Africa region; and 485 embarking in unknown ports. For the period from 1 January to 30 April 2011, a total of 14 stowaway incidents, involving 23 stowaways, were reported to IMO.

65. The draft revised guidelines on the prevention of access by stowaways and the adoption of responsible practices to seek the successful resolution of stowaway cases was adopted by the Maritime Safety Committee at its eighty-eighth session in December 2010, and by the Facilitation Committee at its thirty-seventh session in May 2011. They were expected to be issued as a joint document by the two Committees later in 2011. In its resolution on the adoption of the revised guidelines, the Committee urged Governments to implement in their national policies and practices the amended procedures recommended in the guidelines as from 1 October 2011.

against the Smuggling of Migrants by Land, Sea and Air, supplementing the United Nations Convention against Transnational Organized Crime.\textsuperscript{88} As at 22 August 2011, there were 163 States parties to the United Nations Convention against Transnational Organized Crime and the Protocols thereto, and the Protocols, on the trafficking in persons, the smuggling of migrants, and firearms, had been ratified by 146, 129 and 89 States, respectively.\textsuperscript{89}

67. The Office also continues to provide specialized technical assistance to Member States and relevant actors to assist them in combating and preventing the smuggling of migrants and the trafficking in persons, including through the specialized Joint Port Control Units of its Global Container Programme.

68. On 22 March 2011, the European Commission, the European Investment Bank and IMO launched a study on maritime cooperation in the Mediterranean, which is aimed at, inter alia, providing elements that will facilitate the development of integrated maritime surveillance.\textsuperscript{90}

VII. Maritime security

69. Crimes at sea, including piracy and armed robbery against ships, terrorist acts against shipping and other maritime interests, and transnational organized crimes, such as illegal traffic in narcotic drugs and psychotropic substances, threaten the lives and livelihoods of seafarers and the security of States, and disrupt legitimate uses of the oceans and their resources.

A. Piracy and armed robbery against ships

70. In the first five months of 2011, 273 attacks were reported worldwide, compared with 171 in 2010.\textsuperscript{91} In 2010, the number of acts or attempted acts of piracy and armed robbery at sea worldwide, as reported to IMO, was 489,\textsuperscript{92} compared with 406 in 2009.\textsuperscript{93}

71. At the regional level in 2010, the following numbers of incidents were reported to IMO: 172 in East Africa, 77 in the Indian Ocean, 16 in the Arabian Sea, 134 in the South China Sea, 40 in South America and the Caribbean, 47 in West Africa, 2 in the Persian Gulf, and 1 in the Mediterranean Sea. According to IMO, most of the attacks were reported to have occurred or to have been attempted in international waters, which was owing largely to the steep increase in incidents off the coast of Somalia and in the Indian Ocean. However, in other regions, the majority of incidents occurred in the territorial waters of the coastal States concerned while the ships were at anchor or berthed.\textsuperscript{94}

72. In the first six months of 2011, the International Maritime Bureau of the International Chamber of Commerce reported that it had received 266 reports of attacks; 163 were attributable to Somali pirates, compared with 100 in the same period in 2010. This represented a 63 per cent increase and was the highest number ever. The Bureau also noted that there had been a number of attacks off the coast of Benin and Nigeria in the Gulf of Guinea.\textsuperscript{95}

73. Piracy and armed robbery against ships in Asia. The Information-Sharing Centre of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia reported that the period January-June 2011 was characterized by an overall increase in incidents compared with the same period over the past four years. There was an increase in the number of incidents at ports and anchorages in Indonesia, the Straits of Malacca and Singapore. However, there was an improvement in the situation at the ports and anchorages in Bangladesh and Viet Nam.\textsuperscript{96}

74. Piracy and armed robbery against ships off the coast of Somalia. According to the International Maritime Bureau, attackers are using hijacked ocean-going vessels as “mother ships” to carry out their operations. This has enabled them to expand their geographical scope.\textsuperscript{97} According to IMO, the wider operational range of Somali-based pirates led to an increase in the number of incidents in the Indian Ocean and Arabian Sea but to a decrease in incidents off the coast of East Africa.\textsuperscript{98} Although the overall number of attempted attacks rose, the number of successful attacks fell. Most of the attacks involved weapons and therefore endangered seafarers.\textsuperscript{99} It was reported at the ninth plenary meeting of the Contact Group on Piracy off the Coast of Somalia\textsuperscript{100} that, as at 11 July 2011, 17 ships and 393 crew members were being held, compared with 26 ships and 573 hostages in March 2011.\textsuperscript{101} This decrease was attributed to the actions of the naval forces operating in the region pursuant to Security Council resolutions\textsuperscript{102} and to preventive measures used by merchant vessels.

75. The Security Council continues to be gravely concerned at the growing threat of piracy and armed robbery at sea off the coast of Somalia. In its resolution 1950 (2010), it once again decided to renew for a further period of 12 months the

\textsuperscript{88} See General Assembly resolution 55/25, annexes II and III.

\textsuperscript{89} See www.unodc.org/unodc/en/treaties/CTOC/signatures.html.


\textsuperscript{91} See IMO monthly reports on acts of piracy and armed robbery against ships.

\textsuperscript{92} MSC-4/Circ. 169, para. 5.

\textsuperscript{93} See report of the IMO Maritime Safety Committee on its eighty-seventh session (MSC 87/26).

\textsuperscript{94} MSC-4/Circ. 169, para. 6.

\textsuperscript{95} See report of the International Maritime Bureau of the International Chamber of Commerce on piracy and armed robbery against ships, 1 January-30 June 2011.


\textsuperscript{97} See report of the International Maritime Bureau of the International Chamber of Commerce on piracy and armed robbery against ships, 1 January-30 June 2011.

\textsuperscript{98} MSC-4/Circ. 169, para. 6.

\textsuperscript{99} See report of the International Maritime Bureau of the International Chamber of Commerce on piracy and armed robbery against ships, 1 January-30 June 2011. See also annex I to the report of the Secretary-General on the modalities for the establishment of specialized Somali anti-piracy courts on 15 June 2011 (S/2011/360).

\textsuperscript{100} The Contact Group on Piracy off the Coast of Somalia held its seventh, eighth and ninth plenary meetings on 10 November 2010, 21 March and 14 July 2011, respectively. For background information on the Contact Group, see A/65/69/Add.2, para. 111.

\textsuperscript{101} See communiqué from the ninth plenary meeting of the Contact Group on Piracy off the Coast of Somalia.

authorizations set out in paragraph 10 of its resolution 1846 (2008) and paragraph 6 of its resolution 1851 (2008), as renewed by resolution 1897 (2009), which had been granted to States and regional organizations cooperating with the Transitional Federal Government in the fight against piracy and armed robbery at sea off the coast of Somalia.

76. Both the Security Council and the General Assembly have stressed the need for a comprehensive response in tackling piracy and its underlying causes. In paragraph 7 of its resolution 1976 (2011), the Council requested the Secretary-General to report on the protection of Somali natural resources and waters and on alleged illegal fishing and illegal dumping, including of toxic substances, off the coast of Somalia. The report was scheduled to be issued in October 2011.

77. In his report to the Secretary-General, the former Special Adviser to the Secretary-General on Legal Issues Related to Piracy Off the Coast of Somalia, Mr. Jack Lang, put forward 25 proposals aimed at combating piracy off the coast of Somalia, including the establishment of a court system comprising a specialized court in “Puntland”, a specialized court in “Somaliland” and an extraterritorial Somali specialized court. On 21 June, the Security Council considered the report of the Secretary-General on the modalities for the establishment of specialized Somali anti-piracy courts (S/2011/360), submitted pursuant to Security Council resolution 1976 (2011).

78. The Security Council and the Contact Group on Piracy off the Coast of Somalia continued to emphasize the importance of prosecution. In my report to the Security Council (S/2011/360), I indicated that there were 20 States prosecuting 1,011 pirates; the States were Belgium, the Comoros, France, Germany, India, Japan, Kenya, Madagascar, Malaysia, Maldives, the Netherlands, Oman, Seychelles, Somalia (“Puntland”, “Somaliland” and “South Central”), the Republic of Korea, Spain, the United Arab Emirates, the United Republic of Tanzania, the United States and Yemen. The programme of assistance of the United Nations Office on Drugs and Crime to States in the region to prosecute and imprison persons suspected of acts of piracy focuses, in particular, on States that have agreed to receive suspects arrested by naval forces. The United Nations Development Programme (UNDP) and the Office continued their cooperation with the Transitional Federal Government and Somali regional authorities and provided assistance to piracy prosecutions in “Somaliland” and “Puntland”. They are also providing assistance with respect to the capacity of courts and incarceration facilities.

79. Concerning the criminalization of piracy in national legislation, IMO issued circular letter No. 3180 of 17 May 2011, containing information and guidance on elements of international law relating to piracy that might be useful to States that are either developing national legislation on piracy or reviewing existing legislation. The material in the circular letter had been prepared by the Division for Ocean Affairs and the Law of the Sea, the IMO secretariat, the United Nations Office on Drugs and Crime and the Government of Ukraine. The Division presented its work on elements of national legislation on piracy, pursuant to the Convention, to Government officials at a workshop on legal training for counter-piracy operations, organized by IMO and the Office and held in Djibouti in March 2011. With regard to the financial aspects of Somali piracy, the Security Council has underlined the need to investigate and prosecute those who illicitly finance, plan, organize or unlawfully profit from pirate attacks off the coast of Somalia. The United Nations Office on Drugs and Crime organized a meeting in Nairobi in May 2011 to address piracy and its links to illicit financing. At its ninth plenary meeting, the Contact Group established Working Group 5 to focus on and coordinate efforts to disrupt the pirate enterprise as a whole.

81. Given the continuing threat of piracy, the protection of ships is important. It has been reported that the use of the industry-developed best management practices in respect of piracy off the coast of Somalia and in the Arabian Sea area has reduced the likelihood of a successful attack. At its eighty-ninth session, the Maritime Safety Committee of IMO approved a circular on interim guidance for shipowners, ship operators and shipmasters on the use of privately contracted armed security personnel on board ships in the High-Risk Area and interim recommendations for flag States on the same matter. Each flag State, individually, is to decide whether or not and under what conditions armed security personnel should be authorized for use on board ships flying their flag. On 11 August 2011, the Chamber of Shipping, on behalf of a number of shipping industry associations, wrote a letter to the Secretary-General expressing their grave concern at the continually increasing threat of piracy off the coast of Somalia. In particular, the letter contained a proposal on the establishment of a United Nations force of armed military guards that could be deployed in small numbers on board merchant ships as part of effective counter-piracy measures in the area.

82. On 3 February 2011, IMO launched the theme of the 2011 World Maritime Day, “Piracy: orchestrating the response”. The “Kampala process”, a Somali forum on counter-piracy efforts in Somalia, continued to be a useful dialogue and confidence-building mechanism. In April 2011, a high-level international conference entitled “Global threat, regional responses: forging a common approach to maritime piracy” was organized in Dubai, United Arab Emirates.

103 See preamble to resolution 1976 (2011) and para. 2; see also General Assembly resolution 65/37 A, para. 93.
104 See letter dated 25 January 2011 from the Secretary-General to the President of the Security Council (S/2011/30); annex.
105 See, for example, paras. 13 and 14 of resolution 1976 (2011); see also communiqué from the ninth plenary meeting of the Contact Group on Piracy off the Coast of Somalia.
106 See S/2011/360, annex I; see also communiqué from the tenth plenary meeting of the Contact Group on Piracy off the Coast of Somalia.
107 See S/2011/360, annex V.
111 See communiqué from the eighth and ninth plenary meetings of the Contact Group on Piracy off the Coast of Somalia.
112 Ibid.
113 See MSC.1/Circ.1405.
114 Ibid.
115 Ibid.
116 See communiqué from the ninth plenary meeting of the Contact Group on Piracy off the Coast of Somalia.
117 See http://counterpiracy.ae/.
83. Piracy and armed robbery against ships in the Gulf of Guinea. In a press statement issued on 23 August 2011, the Security Council expressed concern at the reported increase in piracy, maritime armed robbery and hostage-taking in the Gulf of Guinea and its damaging impact on security, trade and economic activities in the subregion. The Council noted the efforts being made by countries in the Gulf of Guinea to tackle the problem, including the launching of joint naval patrols, and plans to convene a summit of Gulf of Guinea Heads of State to discuss a regional response. The need for regional coordination and leadership in developing a comprehensive strategy to address this threat was emphasized, and the Council called on the international community to support the concerned countries, the Economic Community of West African States, the Economic Community of Central African States and other relevant organizations, as appropriate, in securing international navigation along the Gulf of Guinea, including through information exchange, improved coordination and capacity-building. The Council also stressed the need for the United Nations Office for West Africa and the United Nations Office for Central Africa to work within their current mandates, with the United Nations Office on Drugs and Crime and IMO, and with all concerned countries and regional organizations.

B. Terrorist acts against shipping, offshore installations and other maritime interests

84. At its eighty-ninth session, the Maritime Safety Committee approved the “IMO User Guide to SOLAS Chapter XI-2 and the ISPS Code”, which provides guidance to IMO member States on the application of chapter XI-2 of the International Convention for the Safety of Life at Sea and the International Ship and Port Facility Security Code through the development of appropriate legal frameworks, associated administrative practices and procedures, and necessary material, technical and human resources.

C. Transnational organized crime

85. At its twentieth session, in April 2011, the Commission on Crime Prevention and Criminal Justice of the United Nations Office on Drugs and Crime adopted a resolution on combating the problem of transnational organized crime committed at sea, in which it urged Member States to strengthen international cooperation at sea, in which it urged Member States to strengthen international cooperation at sea, including through domestic legislation and legal frameworks. The Commission requested the Office to convene an expert meeting with a view to identifying specific areas in which it could facilitate the investigation and prosecution of cases by Member States.

1. Illicit traffic in narcotic drugs and psychotropic substances

86. According to the United Nations Office on Drugs and Crime World Drug Report 2011, there has been a decline in maritime seizures of some drugs, which may be due in part to improved upstream interception efforts as a result of enhanced sharing of intelligence and enforcement of laws in drug-producing countries.

87. At its fifty-fourth session, held in December 2010 and March 2011, the Commission on Narcotic Drugs emphasized the urgent need for Member States to strengthen international cooperation in monitoring and control systems at all points of entry and exit of narcotic drugs and psychotropic substances, including airports, seaports, and river and customs posts. The United Nations Office on Drugs and Crime has undertaken a wide range of capacity-building activities to assist States in addressing drug trafficking, such as the launching, in June 2010, of the Office’s Centre of Excellence on Maritime Security in Panama City.

88. At the regional level, Heads of National Drug Law Enforcement Agencies, Africa, at its twentieth meeting, highlighted the challenges posed for West African States by the trafficking of cocaine by sea and the challenges posed for East African States by the use of sea routes for trafficking in heroin, especially with regard to enforcement.

89. At the meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific, it was noted that trafficking networks were becoming more sophisticated in using sea freight containers, including through the fraudulent use of duplicate container seal numbers and the contamination of legitimate sea container cargoes with illicit drugs.

90. In Latin America and the Caribbean, some Governments are countering the threat posed by the use of submersible vessels in trafficking, through investments in technologically advanced equipment such as aircraft and non-intrusive search equipment to inspect containers, and through the training of personnel.

2. Transnational organized crime in the fishing industry

91. In April 2011, the United Nations Office on Drugs and Crime issued a study on transnational organized crime in the fishing industry, with a focus on the trafficking in persons, the smuggling of migrants and the illicit traffic in narcotic drugs and psychotropic substances.

119 See report of the Maritime Safety Committee on its eighty-ninth session (MSC 89/25, para. 4.25); see also MSC 89/ WP.6/Add.1.

120 See report of the Commission on its twentieth session (MSC 89/25, para. 4.25); see also MSC 89/WP.6/Add.1.


123 See report of the twentieth meeting of Heads of National Drug Law Enforcement Authorities, Africa (Nairobi, 12-17 September 2010) (UNODC/HONLAF/20/6).

124 See report of the thirty-fourth meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific (Bangkok, 30 November-3 December 2010) (UNODC/HONLAP/34/6).

125 See report of the twentieth meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (4-7 October 2010) (UNODC/HONLAC/20/6).
psychoactive substances. Some of the findings and conclusions of the study indicate that fishers are sometimes trafficked for the purpose of forced labour on board fishing vessels; fishing vessels are used for the smuggling of migrants, illicit traffic in drugs (primarily cocaine) and weapons, and acts of terrorism; and the fishing licensing and control system is vulnerable to corruption.

VIII. Marine scientific research, marine science and technology

A. Marine scientific research and the law of the sea

92. At its twenty-sixth session, held in June and July 2011, the Assembly of the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) discussed the review of the IOC Advisory Body of Experts on the Law of the Sea.

93. In view of the low number of responses to the questionnaire on opportunities for future advice by the Advisory Body, the IOC Assembly extended the duration of the review and the ad hoc open-ended working group established in that regard until October 2011. Noting that various new issues were emerging with respect to marine scientific research and the law of the sea, the Assembly also tasked the working group with suggesting a mechanism to identify and prioritize issues of high interest to IOC and its member States. For example, preliminary analysis of the replies by States revealed a growing need in Africa, in particular, for additional capacity-building such as training in matters related both to the law of the sea and to marine scientific research.

94. The IOC Assembly emphasized the key role of the Commission in supporting the objectives of the regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects (the Regular Process). The Assembly encouraged IOC to further identify and develop areas and modalities of cooperation through discussions with the Division.

95. In anticipation of the United Nations Conference on Sustainable Development, to be held in Rio de Janeiro, in June 2012, the Assembly adopted a statement on the “IOC special contribution to sustainable development”.

96. In order to promote integrated research, the International Council for Science established the Earth system visioning process in 2011 to identify critical questions to be addressed to ensure Earth system sustainability. The process will engage the scientific community in exploring options for a holistic strategy that would employ the full range of sciences and humanities as well as stakeholders and decision makers. Partners in the project include UNESCO, IOC, the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). The goals of the new 10-year Earth System Sustainability Initiative are, inter alia, to deliver, at the global and regional levels, the knowledge that societies need to effectively address global change while meeting economic and social goals; and to engage a new generation of researchers in social, economic, natural, health and engineering sciences in global sustainability research.

B. Capacity-building in marine science

1. Ocean observing programmes

97. In May 2011, IOC released a Framework for Ocean Observing, developed as an outcome of the OceanObs’09 Conference. The Framework draws on lessons learned from the successes of existing ocean observing efforts and outlines a framework to guide the ocean observing community in establishing the requirements for an integrated and sustained global observing system, including the variables to be measured, the approach to measuring those variables, and the way in which data and products will be managed and made widely available. Not only is the framework aimed at integrating new physical, biogeochemical and ecosystems observations needed to support increasing scientific and societal needs; it also provides a basis for sustaining current observing systems and observations.

98. At its twenty-sixth session, the IOC Assembly resolved to reconstitute the governance of the Global Ocean Observing System, with the aim of streamlining and strengthening it. The new structure reconfirms IOC as the lead sponsor responsible for the Global Ocean Observing System, with WMO, UNEP and the International Council for Science as co-sponsors; confirms that the IOC governing bodies become directly responsible for the governance of the System; dissolves the Global Ocean Observing System Scientific Steering Committee and establishes a new Steering Committee, which is expected to have its first meeting in January 2012; and reinforces cooperation with the IOC regional subsidiary bodies and other relevant bodies.

99. Initiatives to enhance the regional and coastal presence of the Global Ocean Observing System, including in polar regions and Africa, have recently been undertaken. It is expected that, in coming years, in the context of the strengthened and streamlined System, opportunities will include: the incorporation

127 Ibid.
128 A/65/69/Add.2, para. 146.
129 See resolution XXVI-4, contained in document IOC-XXVI/3 prov., annex II.
130 See draft report of the twenty-sixth session of the IOC Assembly (IOC-XXVI/3 prov. Pt.2), agenda item 4.8.
131 Ibid.
132 Ibid. (IOC-XXVI/3 prov. Pt.4), agenda item 4.6.
133 See IOC resolution XXVI-5 and annex, contained in IOC-XXVI/3 prov., annex II.
of new biogeochemical observation systems; the delivery of coastal marine management products and tools; the incorporation of new modelling and analysis systems at local scales for coastal and regional seas; continued development of the Global Ocean Observing System presence in Africa, small island developing States and least developed countries; and the integration of tsunami warning system data streams into the System.\(^{143}\)

100. IOC has released a new manual, which is a scientific summary for policymakers, entitled *The International Thermodynamic Equation of Seawater — 2010: Calculation and Use of Thermodynamic Properties.*\(^{144}\) The manual describes the new standards for interpretation of the salinity, temperature and pressure of seawater to derive fundamental quantities such as density, speed of sound and heat capacity of seawater,\(^{145}\) and enhances public awareness of the societal benefits of sustained ocean observations.\(^{146}\)

101. The World Association of Marine Stations was created in April 2010. It has the potential to become a keystone in a global network of marine stations for coordinated strategies in coastal research, monitoring and related management, and to create opportunities for expanded collaborations all over the world.\(^{147}\) Although the Association is still being developed,\(^{148}\) it is already recognized as an important achievement in line with chapter 17 of Agenda 21 with respect to strengthening international and regional cooperation and coordination.\(^{149}\)

2. **International Oceanographic Data and Information Exchange**

102. At its twenty-sixth session, the IOC Assembly established an Ocean Biogeographic Information System Project Office to be hosted by the United States, as well as an International Oceanographic Data and Information Exchange Group of Experts for the Information System.\(^{150}\) The International Oceanographic Data and Information Exchange has been instructed by the Assembly to fully integrate the harmful algae information system into its future workplans.\(^{151}\)

103. With regard to the exchange of information and data, the IOC Assembly continued to urge IOC member States to establish and/or strengthen national oceanographic data centres, marine libraries and ocean biogeographic information system nodes. The International Oceanographic Data and Information Exchange is also developing capacity through its support for regional data and information management projects and a comprehensive training programme under the OceanTeacher project and the OceanTeacher Academy Training Course.\(^{152}\)

3. **Harmful algal blooms**

104. Harmful algal events continue to be globally pervasive and to affect human health and economic interests that depend upon coastal and ocean resources. At its meeting in April 2011, the IOC Intergovernmental Panel on Harmful Algal Blooms identified areas of major achievement, including: (a) the launch of the global ecology and oceanography of harmful algal blooms research plans for the core research projects in fjords and coastal embayments and the development of a research plan for benthic harmful algal blooms; (b) the development of regional activities; (c) the implementation of 10 training courses and training-through-research projects; (d) the continued development of the integrated Intergovernmental Panel on Harmful Algal Blooms-International Oceanographic Data and Information Exchange harmful algae information system; and (e) the continued publication of the IOC *Harmful Algae News*. The Panel adopted several resolutions, concerning (a) regional harmful algal blooms programme development; (b) biotoxin monitoring, management and regulations; (c) the global ecology and oceanography of harmful algal blooms research programme; (d) harmful algae and desalination of seawater; (e) revised terms of reference for the task team on algal taxonomy; (f) harmful algae and global change; and (g) harmful algae and fish-killing marine algae. It also adopted a revised strategy for the Intergovernmental Panel and a focus for activities on the transfer and introduction of harmful algal blooms species by human activity such as shipping (ballast water).\(^{153}\)

105. At its twenty-sixth session, the IOC Assembly stressed the importance of capacity development, improved public awareness and educational material targeting a wide audience.\(^{154}\) IOC continues to tailor capacity development activities to address such emerging issues as adaptation to climate change. A needs assessment and a new strategy for capacity development are being devised on the basis of the needs of States.

**C. Early warning systems**

106. The 11 March 2011 magnitude 9.0 earthquake off the Pacific coast of Tohoku, Japan, and the ensuing tsunami demonstrated that tsunamis are a constant and unpredictable hazard requiring continuous efforts, detection systems and emergency responses.\(^{155}\) The earthquake generated hundreds of aftershocks, many of them greater than magnitude 6, and caused dramatic loss of life, extensive damage to infrastructure and livelihoods, and pollution of the marine environment.

107. IOC provides the intergovernmental coordination of tsunami early warning and mitigation systems at both the global and regional levels. Overall, more than 400 sea-level stations can report real-time observations through the IOC Sea-Level Station Monitoring Facility. The number of seismic stations that deliver data in real time has increased from 350 in 2004 to more than 1,200 today. With increasingly


\(^{144}\) IOC/BRO/2010/7.


\(^{146}\) Ibid.

\(^{147}\) IOC contribution.

\(^{148}\) For more information on the progress and implementation of the World Association of Marine Stations, see IOC-XXVI/2, annex 12.

\(^{149}\) IOC contribution.

\(^{150}\) See resolution XXVI-30 contained in document IOC-XXVI/3 prov., annex II.

\(^{151}\) See resolution XXVII-11.

\(^{152}\) IOC contribution; see also www.oceanteacher.org.

\(^{153}\) See IOC/IPHAB-X/3 prov.

\(^{154}\) See IOC-XXVI/3 prov: Pt.3, agenda item 5.

dense detection networks and more frequent transmission of data, tsunami warning centres can more quickly confirm the existence of a destructive tsunami.\textsuperscript{156}

108.\textit{Global systems.} The fourth meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems was held in Paris in March 2011. The Working Group evaluated progress in actions and decisions taken by the governing bodies and reviewed an advanced draft of the "Compendium of definitions and terminology on sea-level-related hazards, disasters, vulnerability and risks in a coastal context" and of the joint report of the International tsunami Partnership and the Data Buoy Cooperation Panel on ocean observing platform vandalism. The Working Group also recommended that an intergovernmental coordination group task team on tsunami hazard assessment be established by the IOC Assembly.

109. At its twenty-sixth session, the IOC Assembly considered the report of the Data Buoy Cooperation Panel and the International Tsunami Partnership, entitled "Ocean data buoy vandalism: incidence, impact and responses."\textsuperscript{157} Noting relevant General Assembly resolutions,\textsuperscript{158} the IOC Assembly recognized that vandalism and damage to ocean observing networks took many forms, including ship impacts, incidental damage, direct exploitation of moorings as fish aggregation devices, intentional damage and theft. The Assembly urged member States to adopt preventive and public outreach measures.\textsuperscript{159}

110.\textit{Pacific Ocean.} Working Group 2 of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System and its subsidiary task teams met in February and March 2011 in New Zealand, and decided to establish a task team on sea-level monitoring for tsunami detection and warning as its subsidiary body. Recommendations aimed at intensifying seismic training courses for national warning centres and better coordinating with donors on installation, training and data-sharing were adopted by the Pacific Tsunami Warning Centre. It was also acknowledged that over the previous two years, SeisComP3 had become the commonly used regional earthquake analysis system.\textsuperscript{160}

111. During the earthquake in Japan in March 2011, the Pacific Tsunami Warning Centre and the Northwest Pacific Tsunami Advisory Centre issued tsunami warning bulletins for most Pacific Ocean countries and kept the national tsunami warning centres updated on the progress of the tsunami.\textsuperscript{161} Having improved its seismic detection systems, the Pacific Tsunami Warning Centre was able to identify the location and magnitude of the earthquake within minutes and therefore issue timely regional warnings to the Pacific Ocean countries. The deep-ocean assessment and reporting of tsunami buoys and sea-level monitoring stations also worked well, and the communications systems allowed for near-real-time monitoring of the event.\textsuperscript{162}

112.\textit{Indian Ocean.} The eighth session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System was held in Australia in May 2011. The Intergovernmental Group decided to hold an Indian Ocean wave exercise on 12 October 2011.

113.\textit{Mediterranean Sea.} A new Tsunami Information Centre for the North-East Atlantic, the Mediterranean and Connected Seas was established by partners from the three areas, who met in Paris on 1 April 2011. The project is funded by the European Union and is aimed at raising the awareness of organizations and citizens regarding tsunamis.

D.\textit{Recent developments in marine technology}

114. In my report issued on 22 March 2011, I included updates on recent developments in marine technology, in particular with respect to biodiversity in areas beyond national jurisdiction.\textsuperscript{163} The report of the Secretary-General of the Authority also provides information on marine technology in the area of seabed mining.\textsuperscript{164}

115.\textit{Energy.} Submarine nuclear power stations were designed to produce 50 to 250 MW of electricity. The small power stations are intended to be moored at a depth of 60 to 100 metres, a few kilometres away from the coastline. Studies are ongoing to review technical options and safety and security aspects of such facilities.\textsuperscript{165}

116. Offshore wind turbines have been developed in recent years, in particular in Europe and Asia. The European Wind Energy Association has set a target of installing 40 GW of offshore wind power capacity by 2020.\textsuperscript{166} Offshore wind turbine farms are mostly seabed fixed platforms, limited to 30 metres in depth. However, to benefit from stronger and more consistent winds, offshore companies have developed and are continuing to test floating turbines for waters up to 700 metres in depth.\textsuperscript{167} While these technologies have a comparatively small footprint on the ocean floor and are less visible if located further offshore, biologists remain concerned about potential environmental consequences.\textsuperscript{168}

117. The SeaGen tidal energy turbine in Northern Ireland,\textsuperscript{169} with a 1.2 MW capacity, is the world’s only commercial-scale tidal current turbine that generates power into an electricity grid. There are currently plans to deploy four tidal farms in

\textsuperscript{156} IOC contribution.


\textsuperscript{158} Resolution 64/71, para. 172; 64/72, para. 109; and 65/37 A, para. 196.

\textsuperscript{159} IOC resolution XXVI-6 contained in document IOC-XXVI/3. annex II.

\textsuperscript{160} For further information, see “SeisComP3 software and hard sensors take new approach to tsunami early warning”, available from www.computescotland.com/seiscomp3-software-and-hard-sensors-take-new-approach-to-tsunami-early-warning-1244.php.

\textsuperscript{161} See http://itic.ioc-unesco.org.

\textsuperscript{162} See http://odbc.noaa.gov/dart/dart.shtml.

\textsuperscript{163} A/66/70, paras. 26-28.

\textsuperscript{164} ISBA/17/A/2, paras. 80-88.

\textsuperscript{165} See endcnsgroup.com/2011/01/20/dcns-va-realiser-avec-areva-lce-eea-et-edf-les-etudes-de-validation-de-son-concept-innovant-flexblue.


\textsuperscript{168} Ibid.

\textsuperscript{169} A/63/63/Add.1, para. 118.
the United Kingdom of Great Britain and Northern Ireland by the end of the decade. 170

118. Ocean tests are commencing on a wave energy device called the PB150 PowerBuoy,171 which has a peak-rated power output of 150 kW. 172 The device follows earlier models that have proved capable of responding to sometimes severe wave conditions.

119. The viability of using kelp as a biofuel is being studied, since marine ecosystems are an untapped resource that could account for more than 50 per cent of global biomass. 173

120. **Shipping.** Satellite remote sensing technologies are increasingly being used for fleet navigation optimization. Altimetry 174 and meteorology satellites with in situ observations 175 to model sea currents in near-real time have been used to optimize ship paths through currents, resulting in fuel savings of up to 8 per cent (on average about 4 per cent). 176 In addition, in 2010 and 2011, satellite radar data 177 were used to analyse and monitor the ice situation along the Northern Sea Route to provide operational routing recommendations to the icebreaker fleet escorting tankers, thereby ensuring safe and cost-effective navigation. 178

121. **Other.** The Gemini SeaTec Mammal Detection System provides real-time multibeam sonar monitoring of marine wildlife around subseafturbines. The software provides early warning of the presence of sea mammals, 179 thereby allowing operators sufficient time to take corrective action as required to protect marine life.

**E. Submarine cables and pipelines**

122. With more than 95 per cent of electronic communications worldwide transmitted via fibre-optic submarine cables, and in view of the recent exponential growth in submarine cables triggered by the Internet, the significance of submarine cables and critical communications infrastructure cannot be underestimated. In April 2011, following on from the 2009 workshop on submarine cables and the law of the sea, 180 the Centre for International Law at the National University of Singapore and the International Cable Protection Committee held a workshop on the protection of submarine cables. 181 At the workshop, recommendations for cooperation between

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171 See phx.corporate-ir.net/phoenix.zhtml?c=155437&p=iol-news&ArticleID=1561072.

172 This is equivalent to the energy consumption of approximately 150 homes.


174 Such as Jason-1, Envisat or ERS-2, Topex/Poseidon and GFO.

175 Such as Mercator Ocean, Forecast Model; see www.mercator-ocean.fr/fr.


177 Such as Radarsat-1.


180 A/65/69, paras. 71 and 132.

over the past three decades. It was estimated that nearly 45 million people were directly engaged in capture fisheries or aquaculture in 2008 and that at least 12 per cent of these individuals were women. This number represents a 167 per cent increase compared with the 16.7 million people who were thus engaged in 1980.\(^{166}\)

126. Although capture fisheries continue to provide the greater number of jobs, the share of employment in these fisheries has stagnated or decreased as a result of the decline in fish stocks caused by overfishing and habitat destruction. Increased opportunities are being provided by the aquaculture industry, and one estimate indicates that fish farmers accounted for one quarter of the total number of workers in the fisheries sector in 2008, or nearly 11 million.\(^{167}\)

1. Review by the General Assembly of actions taken by States and regional fisheries management organizations and arrangements in response to resolutions 61/105 and 64/72

127. At its sixty-sixth session, the General Assembly is to conduct a review of the actions taken by States and regional fisheries management organizations and arrangements in response to relevant paragraphs of resolutions 61/105 and 64/72, to address the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks. Notably, pursuant to paragraph 129 of resolution 64/72, the review will be conducted with a view to ensuring the effective implementation of the measures set out in the resolutions and to make further recommendations where necessary. The review will also take into account the discussions during a workshop to be held at United Nations Headquarters on 15 and 16 September 2011.

128. In order to assist the General Assembly in its review, the Secretary-General has prepared a report on the actions taken by States and regional fisheries management organizations and arrangements in response to resolutions 61/105 and 64/72.\(^{168}\)

2. FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas

129. FAO has initiated a programme on deep-sea fisheries in the high seas with the aim of assisting States, institutions, the fishing industry and regional fisheries management organizations and arrangements in the implementation of the 2008 International Guidelines for the Management of Deep-Sea Fisheries in the High Seas.\(^{169}\) One component of the programme, which is aimed at establishing a knowledge baseline in relation to these fisheries and related ecosystems, involves the development of a database of high-seas vulnerable marine ecosystems and related information that will allow for the improved dissemination of information on these ecosystems. Several organizations and bodies are currently active in the development of ecological criteria for the identification of marine areas that require protection.\(^{191}\)

130. At its twenty-ninth session, held in January-February 2011, the Committee on Fisheries of FAO recommended that FAO collaborate with relevant international organizations, such as the secretariat of the Convention on Biological Diversity and UNEP, to build and share information, create synergies and provide coherent guidance.\(^{192}\)

3. FAO International Guidelines for By-Catch Management and Reduction of Discards

131. The international community has expressed growing concerns about the impacts of by-catch and discards on the fishery resources and food security.\(^{193}\) Levels of fishing mortality as a result of by-catch and discards threaten the long-term sustainability of many fisheries and the maintenance of biodiversity in many areas, resulting in increased food insecurity and adversely affecting the livelihoods of millions of fishers and fishworkers dependent on fish resources.\(^{194}\)

132. Following a request made at the twenty-eighth session of the FAO Committee on Fisheries, in March 2009,\(^{195}\) a technical consultation\(^{196}\) on the development of international guidelines for by-catch management and the reduction of discards was held in Rome in December 2010. At the twenty-ninth session of the Committee, in February 2011, the International Guidelines for By-Catch Management and Reduction of Discards were endorsed and it was recommended that FAO provide support in capacity-building and in the implementation of the Guidelines, and that it ensure that the guidelines did not become barriers to international trade.\(^{197}\)

133. The guidelines are intended to assist States and regional fisheries management organizations and arrangements in the management of by-catch and the reduction of discards in conformity with the FAO Code of Conduct for Responsible Fisheries.\(^{198}\) They are aimed at promoting responsible fisheries by minimizing the capture and mortality of species and sizes that will not be used; providing guidance on measures that contribute to more effective management of by-catch and reduction of discards; and improving reporting and the accounting of all components of the catch of which by-catch and discards are subsets.\(^{199}\)

\(^{166}\) A/66/70, para. 161; see also General Assembly resolution 65/37 A, para. 178.

\(^{167}\) See CL 141/3 (C 2013/20).

\(^{168}\) See, for example, General Assembly resolution 65/38, preamble.


\(^{170}\) See report of the Committee on Fisheries on its twenty-eighth session, Rome, 2-6 March 2009, FAO Fisheries and Aquaculture Report No. 902 (FHL/R902 (Esp)).


\(^{172}\) FAO contribution; see also CL 141/3 (C 2011/20).

\(^{173}\) Ibid.


\(^{175}\) Ibid.

\(^{176}\) FAO contribution; see also www.fao.org/fishery/topic/4450/158143/en.
4. Global record of fishing vessels

134. In its resolution 65/38, the General Assembly encouraged FAO, in cooperation with States, regional economic integration organizations, IMO and regional fisheries management organizations and arrangements, to expedite efforts to develop and manage a comprehensive global record of fishing vessels, including with a unique vessel identifier system.200 The request followed a technical consultation that had been held in Rome in November 2010 to identify a structure and strategy for the development and implementation of the global record of fishing vessels, refrigerated transport vessels and supply vessels. The technical consultation saw the adoption of a series of recommendations on the proposed structure and strategy for the development and implementation of the global record.201

135. At its twenty-ninth session, the Committee on Fisheries noted the recommendations of the technical consultations and recognized the need for further work to refine some of the terms used in the recommendations for establishing the global record.202 The Committee recognized that the global record should be developed as a voluntary initiative with a phased approach to implementation, and in a cost-effective manner, taking advantage of existing systems and technologies.203

5. Cooperation among regional fisheries management organizations

136. The third joint meeting of tuna regional fisheries management organizations was held in La Jolla, United States, in July 2011. At the meeting, participants focused on implementing the process of coordination among the five tuna regional fisheries management organizations204 on areas of mutual concern, and on increasing harmonization and communication among the relevant regional fisheries management organizations, while decreasing duplication of efforts. A steering committee comprising the Chairs and Vice-Chairs of each of the five organizations was established, with the mandate to review and report to the five regional fisheries management organizations, on a regular basis, on the implementation of the recommendations agreed during the Kobe process.205

137. The Inter-American Tropical Tuna Commission reported that it was cooperating with the Western and Central Pacific Fisheries Commission to study the condition of bigeye tuna in the Pacific.206

6. Assessing the performance of flag States

138. At its twenty-ninth session, the Committee on Fisheries recognized that compliance by flag States with their duties under international law was an essential factor in achieving sustainable fisheries and combating illegal, unreported and unregulated fishing.207

139. The FAO technical consultation on flag State performance was held in Rome in May 2011. The purpose of the technical consultation was the drafting of criteria for flag State performance, including the assessment of flag State performance and possible actions in accordance with international law to encourage compliance, and assistance to developing countries in improving their performance as flag States.208 A second technical consultation is expected to be held in 2012.209

7. Small-scale fisheries

140. The importance of small-scale fisheries for poverty alleviation and food security has increasingly been recognized.210 However, the situation of many small-scale fishing communities remains precarious, and the potential of the sector has not been fully realized.211

141. Drawing on the outcomes of regional workshops on securing small-scale fisheries,212 the Committee on Fisheries approved, at its twenty-ninth session, the development of a new international instrument on small-scale fisheries that would draw on relevant existing instruments, complementing the Code of Conduct for Responsible Fisheries, with the aim of enhancing the contribution of small-scale fisheries to poverty alleviation and food security. The Committee also agreed that the instrument should be voluntary in nature, address both inland and marine fisheries, and focus on the needs of developing countries.213

B. Whales and other cetaceans

142. The International Whaling Commission, at its 2011 session, reviewed the status of a number of whale stocks, focusing in particular on the endangered Western North Pacific gray whale owing to great concern about the possible threats to this population from oil and gas activities. In the context of the revised management scheme, the Commission considered progress in the work relating to

200 Resolution 65/38, para. 61.
202 Report of the Committee on Fisheries on its twenty-ninth session, 31 January-4 February 2011 (CL 141/3 (C 2011/20)).
203 Ibid.
204 The five tuna regional fisheries management organizations are: the Commission for the Conservation of Southern Bluefin Tuna; the Inter-American Tropical Tuna Commission; the International Commission for the Conservation of Atlantic Tunas; the Indian Ocean Tuna Commission; and the Western and Central Pacific Fisheries Commission.
205 Recommendations of the third joint meeting of tuna regional fisheries management organizations and arrangements, held in La Jolla, United States, from 11 to 15 July 2011 (K3-REC-A).
206 Contribution of the Inter-American Tropical Tuna Commission.
207 See report of the Committee on Fisheries on its twenty-ninth session, 31 January-4 February 2011 (CL 141/3 (C 2011/20)).
210 See, for example, General Assembly resolution 65/38, paras. 18, 74, 131 and 132.
211 See “Good practices in the governance of small-scale fisheries: sharing of experience and lessons learned in responsible fisheries for social and economic development” (COFI/2011/1).
212 See, for example, report of the Asia-Pacific Fishery Commission of FAO Regional Consultative Workshop entitled “Securing sustainable small-scale fisheries: bringing together responsible fisheries and social development”, Bangkok, 6-8 October 2010 (FAO Regional Office for Asia and the Pacific. RAP Publication 2010/19).
213 See report of the Committee on Fisheries on its twenty-ninth session, 31 January-4 February 2011 (CL 141/3 (C 2011/20)).
the reviews for the Western North Pacific common minke whales, Western North Pacific Bryde’s whales, North Atlantic fin whales and North Atlantic common minke whales. In relation to aboriginal subsistence whaling, catch limits for a number of whale populations taken by Saint Vincent and the Grenadines, Greenland and the native people of Alaska, Chukotka and Washington state remained unchanged. The Commission established an ad hoc working group on aboriginal subsistence whaling to address unresolved issues.214

143. The Commission also considered reports by its working group on whale killing methods and associated animal welfare issues. In relation to welfare issues associated with the entanglement of large whales, the Commission agreed, inter alia, to convene a second workshop on this issue,215 undertake capacity-building, establish a standing group of experts to advise member countries upon request, and assist member countries in research and promote cooperative research.216

144. The Commission adopted a resolution on safety at sea, in which, inter alia, any actions posing a risk to human life and property were condemned; the primacy of IMO on matters relating to safety at sea was recognized; and cooperation in accordance with the United Nations Convention on the Law of the Sea and other relevant instruments in the investigation of incidents at sea, including those that might pose a risk to life or the environment, was urged.

145. The Commission also discussed a proposal to establish a South Atlantic Whale Sanctuary and, in the light of divergent views still being held, agreed to continue discussing the proposal at its next session, in 2012. In the context of its discussions on the future of the Commission, continued dialogue was encouraged.217

X. Marine biological diversity

146. As noted in recent reports,216 in spite of its vital importance, marine biodiversity continues to be under multiple pressures. At the high-level meeting of the General Assembly on biodiversity, held on 22 September 2011 as a contribution to the International Year of Biodiversity, concern continued to be expressed, in particular, about the impacts on marine biodiversity of ocean acidification, invasive alien species, overexploitation of resources, pollution and climate change, including coral bleaching. The achievement of the commitments that the international community set for itself at the United Nations Conference on Environment and Development in 1992 and the World Summit on Sustainable Development in 2002 on some of those issues is lagging. It is expected that the United Nations Decade on Biodiversity (2011-2020), declared by the General Assembly at its sixty-fifth session,217 will provide impetus for further efforts and action towards the conservation and sustainable use of marine biodiversity.218 The United Nations Conference on Sustainable Development, to be held in Rio de Janeiro in 2012, will provide major opportunities in that regard.

215 The report of the first workshop, held in April 2010, is available as document IWC/62/15.
216 A/66/70 and A/66/70/Add.1.
217 See resolution 65/161.
218 A list of activities and initiatives undertaken as part of the Decade is available from www.cbd.int/2011-2020/.
219 See A/66/119.
220 See decision X/1, annex I.
221 A/66/70/Add.1, paras. 102 and 103.
222 See decision X/29.
223 A/66/70/Add.1, para. 103.
224 See decision X/29.
225 A/66/70/Add.1, para. 103.
226 See decision X/13.
227 Decision X/31.
228 Decision X/33.
229 Decision X/38.
152. Intergovernmental science-policy platform on biodiversity and ecosystem services. Pursuant to the request made by the General Assembly in its resolution 65/162, UNEP is working with UNESCO, FAO, UNDP and other organizations to convene a plenary meeting on the intergovernmental science-policy platform on biodiversity and ecosystem services, in the form of an open-ended intergovernmental meeting. At the first session of the meeting, to be held in Nairobi in October 2011, the organizations will consider, inter alia, the draft principles and procedures governing the work of the intergovernmental science-policy platform on biodiversity and ecosystem services, its governance structure and the initial elements of a work programme. At the second session, to be held in early 2012, the organizations are expected to determine the modalities and institutional arrangements and to consider a detailed draft work programme. In anticipation of the sessions, a number of expert and stakeholder workshops and meetings were held in 2011.

153. Other activities. The United Nations University Institute of Advanced Studies is compiling case studies on the role of traditional knowledge in marine and coastal resources management, including through a pan-Pacific workshop on the topic at the International Marine Conservation Congress held in May 2011. In addition, it has published a report on traditional marine management areas of the Pacific in the context of national and international law and policy.

B. Measures for specific ecosystems and species

154. Corals. Pursuant to paragraph 3 of resolution 65/150, I have prepared a report, entitled “Protection of coral reefs for sustainable livelihoods and development”. At its twenty-fifth general meeting, held in November 2010, the International Coral Reef Initiative adopted a recommendation for the Pacific region that encouraged marine research to increase knowledge, inform spatial planning and enhance management decision-making, and encouraged increased information-sharing on climate change and its impacts on coral reefs in the Pacific region. Recognizing that the lionfish invasion in the Caribbean region was a mounting threat to the biodiversity and ecological integrity of the region’s coral reef ecosystems, the Initiative adopted terms of reference for an Ad Hoc Committee on Caribbean Regional Response to Lionfish Invasion. Amended terms of reference for the Ad Hoc Committee on Coral Reef-Associated Fisheries were also adopted at the meeting. In addition, international tools for the sustainable management of coral reefs and the management of accidental releases of pollutants were considered.

155. Wetlands. A number of coastal areas around the world were designated as Wetlands of International Importance and added to the Ramsar List of Wetlands of International Importance, illustrating the significance of the benefits that those sites provide to people and the coastal environment. These include the Kumana Wetland Cluster (Sri Lanka); Complejo Jatlepique (El Salvador); Reisauolopet, Rastryan, Rott-Härstein-Kjær, Skinna, Bear Island (Hjøresøya) and sokkapp (Norway); and Ile de Rachgoun (Algeria).

156. Deep sea. The Census of Marine Life, which was completed in October 2010, helped to advance our knowledge of the biodiversity of vents and seeps, seamounts and abyssal plains. However, our knowledge of life in the deep-sea environment is limited, and no complete catalogues of the species or habitats present in these environments exist. In that regard, IOC implemented the pilot project entitled “Biodiversity and distribution of megafaunal assemblages in the abyssal nodule province of the eastern equatorial Pacific”. It also organized an international expert meeting on deep-water biodiversity in the South Atlantic, the objectives of which included the identification of research and knowledge gaps in South Atlantic processes, biodiversity and resources, and the promotion of a proposal to enhance networking activities and support continuing sampling in the deep South Atlantic ocean.

In the context of its work on the protection and preservation of the marine environment of the Area from mining activities, the Authority published a technical study on the environmental management of deep-sea chemosynthetic ecosystems, which presents design principles for the comprehensive management of chemosynthetic environments in a marine spatial planning context. It also published technical studies on the fauna of cobalt-rich ferromanganese crust seamounts and a marine benthic nematode molecular protocol handbook. The Legal and Technical Commission of the International Seabed Authority considered a draft environmental management plan for the Clarion-Clipperton Fracture Zone, which was adopted by the Council at the seventeenth session of the Authority. The guiding principles of the plan include the concept of the common heritage of mankind; a precautionary approach; the protection and preservation of the marine environment; prior environmental impact assessment; and the conservation and sustainable use of biodiversity. Among other things, the plan is aimed at

231. See http://ipbes.net/.
232. The list and the outcome of these events are available from http://ipbes.net/related-events.html.
233. See http://ipbes.net/.
239. IOC contribution.
240. IOC contribution.
241. IOC contribution.
242. IOC contribution.
244. “Fauna of cobalt-rich ferromanganese crust seamounts”, International Seabed Authority Technical Study No. 8 (Kingston, 2011).
245. Marine benthic nematode molecular protocol handbook (nematode barcoding), International Seabed Authority Technical Study No. 7 (Kingston, 2011).
158. Cetaceans. As migratory species, cetaceans are particularly vulnerable to the cumulative impacts of a number of human activities. In the context of the Convention on the Conservation of Migratory Species of Wild Animals, an analysis of gaps in addressing key threats to cetaceans is being developed, on the basis of which a draft programme of work on cetaceans will be submitted to the Conference of the Parties at its tenth meeting, in Bergen, Norway, in November 2011. A resolution on interactions between cetaceans and fishing activities encouraged parties to improve reporting and to make every effort to reduce cetacean by-catch levels and/or incidences of depredation, in cooperation with affected fishing communities. This resolution also included technical specifications and conditions of use of acoustic deterrent devices. In addition, the parties adopted resolutions on, inter alia, ship strikes on large whales in the Mediterranean Sea; conservation of the Mediterranean short-beaked common dolphin; climate change; and marine protected areas of importance for cetacean conservation. A number of guidelines were also adopted, including with regard to commercial cetacean-watching, a coordinated cetacean stranding response; the impact of anthropogenic noise on cetaceans; and the granting of exceptions to article II, paragraph 1, of the Agreement for the purpose of non-lethal in situ research.

160. At their fourth meeting, the parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Neighbouring Atlantic Area adopted a work programme for 2011–2013, which identified the survey initiative and by-catch as high-priority issues. With regard to surveying, the parties adopted a resolution on comprehensive cetacean population estimates and distribution. A resolution on interactions between cetaceans and fishing activities encouraged parties to improve reporting and to make every effort to reduce cetacean by-catch levels and/or incidences of depredation, in cooperation with affected fishing communities. The resolution also included technical specifications and conditions of use of acoustic deterrent devices. In addition, the parties adopted resolutions on, inter alia, ship strikes on large whales in the Mediterranean Sea; conservation of the Mediterranean short-beaked common dolphin; climate change; and marine protected areas of interest for cetacean conservation. A number of guidelines were also adopted, including with regard to commercial cetacean-watching, a coordinated cetacean stranding response; the impact of anthropogenic noise on cetaceans; and the granting of exceptions to article II, paragraph 1, of the Agreement for the purpose of non-lethal in situ research.

161. Other migratory species. A number of threats to marine migratory species and measures to address them continue to be addressed in the context of the Convention on the Conservation of Migratory Species of Wild Animals. At the tenth meeting of the Conference of the Parties to the Convention, in November 2011, the parties are expected to consider, in particular, ecological networks, marine debris, by-catch, a programme of work for cetaceans, and climate change. An expert workshop convened in June 2011 under the auspices of the secretariat of the Convention considered relevant contributions to the achievement of the management goals and targets set forth in the Plan of Implementation of the World Summit on Sustainable Development.

162. At their first official meeting, held in October 2010, the States signatory to the Memorandum of Understanding on the Conservation and Management of Dugongs (Dugong dugon) and their Habitats throughout their Range considered, inter alia, the global status of the dugong and endorsed a standardized catch/incidental catch survey tool and recommendations on management tools, including early implementation of pilot projects.

163. Convention on International Trade in Endangered Species of Wild Fauna and Flora. The Working Group on Introduction from the Sea, established under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, developed, during the intersessional period, a discussion document and a draft revised resolution on introduction from the sea for consideration at the sixty-first meeting of the Standing Committee. The discussion document outlines efforts undertaken by parties since 2000 to harmonize their interpretation and implementation of the Convention’s provisions on introduction from the sea, and a possible way forward on this issue.

164. At its meeting in July 2011, the Animals Committee of the Convention considered reviews of significant trade in specimens of Appendix II species of the Indo-Pacific bottlenose dolphin, the beluga and the Great Seahorse. The Committee recommended four seahorse species as being of priority concern for the review of significant trade. In relation to sturgeon, the Committee made a number of recommendations relating to assessments of trade, including regional cooperation, training and capacity-building. The Committee undertook parties’ invitation to consider their role in the caviar trade to reinforce their control of that trade, owing to serious concern about the legality of sturgeon products on the market. The Committee also adopted a recommendation on sharks requesting parties to the Convention to submit a list of shark species that they believe to require additional action to enhance their conservation and management; the impact of input from parties based on the annexed questionnaire on domestic regulations on fishing, retention and landing of sharks and on imports and exports of shark parts; and requesting the secretariat of the Convention to collaborate with the secretariats of FAO and the Convention on the Conservation of Migratory Species of Wild Animals. Regarding sea cucumbers, the Committee established an intersessional working group to evaluate the outcomes of an FAO workshop on the sustainable use and management of sea cucumber fisheries conducted in 2007 and to recommend follow-up actions to the sixteenth meeting of the Conference of the Parties, to be held in 2013.

165. The secretariat of the Convention indicated that emphasis had been placed on strengthening the ability of national Convention authorities to implement and enforce the Convention and of customs officers to identify trade in listed specimens.

253. See www.cms.int/publications.html.
In addition, capacity-building workshops addressed specific marine species listed in the appendices to the Convention, such as queen conch, giant clams, corals, humphead wrasse and seahorses. The secretariat of the Convention is currently reviewing a draft updated capacity-building strategy.

C. Marine genetic resources

166. As the policy discussions are ongoing in a number of forums, research undertaken by a number of public, private and public-private initiatives continues to discover, identify and uncover the roles played by the smallest organisms in marine ecosystems and the potential of marine genetic resources for, inter alia, food security, agriculture, health, industrial applications, environmental remediation and biofuel production. In particular, research is increasingly being carried out on the potential of marine cyanobacteria and algae for renewable hydrogen production.

167. The United Nations University Institute of Advanced Studies, which continues to document the use of marine genetic resources from both within and beyond areas of national jurisdiction, has documented cases in which companies have sourced genetic resources from areas beyond national jurisdiction. Most of these cases relate to hydrothermal vent micro-organisms, and one patent was identified for a product based on a fungus from deep-sea sediments. The filing of patents associated with marine organisms is increasing, with diverse taxonomic origin (e.g., fish, krill, sponges, sea slugs, algae and microbes) of the patented inventions. Many patents are related to the production of enzymes and result from technological advances in ocean exploration and molecular biology.

168. Differences in capacity remain, and 10 States account for some 90 per cent of the patents related to marine genetic resources. In addition, the informational basis related to marine genetic resources is still incomplete, with further sharing of research and information being needed on, inter alia, the geographic origin of the material and the number of patented inventions resulting in marketed products.

169. From a policy and legal perspective, issues related to the relevant legal regime for respect to marine genetic resources in areas beyond national jurisdiction continued to be discussed at the fourth meeting of the Ad Hoc Open-ended Informal Working Group.

170. In the context of the Convention on Biological Diversity, my previous report provided information on the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, adopted at the tenth meeting of the Conference of the Parties. When in force, the Protocol will apply to marine genetic resources falling within its scope.

171. The first meeting of the Open-ended Ad Hoc Intergovernmental Committee for the Protocol, established to undertake the preparations necessary for the first meeting of the parties to the Protocol, was held in June 2011. At the meeting, the Committee adopted recommendations on modalities for the operation of the access and benefit-sharing clearing house, measures to assist in capacity-building and development and the strengthening of human resources and institutional capacities, measures to raise awareness of the importance of genetic resources and associated traditional knowledge, and cooperative procedures and institutional mechanisms to promote compliance with the Protocol and to address cases of non-compliance.

172. A series of capacity-building workshops on access and benefit-sharing are being jointly organized by the secretariat of the Convention on Biological Diversity and the secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture to support the early entry into force of the Protocol and identify capacity-building needs and priorities in its implementation.

173. The Commission on Genetic Resources for Food and Agriculture, at its thirteenth regular session, held in Rome in July 2011, considered progress in the preparation of the report entitled “The state of the world’s aquatic genetic resources”. Discussions on whether the review should include aquatic genetic resources in marine areas beyond national jurisdiction were inconclusive. FAO was requested to continue its work in that regard by focusing initially on cultured aquatic species. The Commission also agreed on the need for a road map or work programme on climate change and genetic resources for food and agriculture, a draft of which would be considered at the next session of the Commission, and requested FAO to compile information on biodiversity hotspots for food and agriculture that were under particular threat.

174. At its eighteenth and nineteenth sessions, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of
XI. Protection and preservation of the marine environment and sustainable development

A. Introduction

175. At the High-level Plenary Meeting of the sixty-fifth session of the General Assembly on the Implementation of the Millennium Development Goals and the further implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, both of which were held in September 2010, safety, sound management and protection of the marine environment were highlighted at the twelfth meeting of the Informal Consultative Process. The environmental management plan for the Clarion-Clipperton Fracture Zone, adopted at the seventeenth session of the International Seabed Authority, includes the maintenance of regional biodiversity, ecosystem structure and function, and the protection of the non-living resources of the seabed.

176. Yet, no marine areas are unaffected by human activities, and almost half of marine ecosystems are in a poor state of health, with consequent resource and security implications for human communities.

177. The current state of the oceans reminds us of the acute need to implement the measures set out in part XII of the United Nations Convention on the Law of the Sea for the protection and preservation of the marine environment, and to continue to improve management and coordination among sectoral bodies for the sustainable development of the oceans and their resources. New management tools, such as marine spatial planning, are increasingly understood and being put into practice.

B. Ecosystem approaches and integrated management

178. The third observance by the United Nations of World Oceans Day, on 8 June 2011, and the twelfth meeting of the United Nations Open-ended Informal Working Group on the Law of the Sea, held in 2012 on the theme of a green economy in the context of sustainable development, the third session of the Intersessional Working Group on the Use of the Mechanisms Provided for therein, including those related to contingency plans and monitoring and environmental assessment, Some progress continues to be made towards increased cooperation and coordination among sectoral bodies for the sustainable development of the oceans and their resources; New management tools, such as marine spatial planning, are increasingly understood and being put into practice.

179. The need for ocean management based on an ecosystem approach is widely recognized by the international community.270

180. At the fourth meeting of the Ad Hoc Open-ended Informal Working Group, the need to implement ecosystem approaches to the management of activities related to the conservation and sustainable use of the oceans and marine living resources was further highlighted.271

181. The need to take concrete steps to achieve an integrated and ecosystem-based approach to the management of human activities having an effect on marine ecosystems, and the application of an ecosystem-based approach to fisheries management, were highlighted at the twelfth meeting of the Informal Consultative Process. The environmental management plan for the Clarion-Clipperton Fracture Zone, adopted in the seventh session of the International Seabed Authority, includes the maintenance of regional biodiversity, ecosystem structure and function, and the protection of the non-living resources of the seabed.

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ecosystem function, together with the application of integrated ecosystem-based management. 273

182. UNEP has published an introductory guide on ecosystem-based management for marine and coastal areas. 274 The guide clarifies that the terms “ecosystem-based management” and “ecosystem approach” are used interchangeably to describe the same science-based process addressing the following core elements: recognizing connections within and across ecosystems; utilizing an ecosystem services perspective; addressing cumulative impacts; managing for multiple objectives; and embracing change, learning and adapting.

183. In the context of the Global Environment Facility medium-size project entitled “Development of the methodology and arrangements for the Global Environment Facility Transboundary Waters Assessment Programme”, UNEP also finalized and published a methodology for large marine ecosystems and open oceans. The submission of the full project to the Facility was completed in March 2011.

184. At the regional level, the IOC Subcommission for the Western Pacific is carrying out a project aimed at promoting the application of remote sensing for integrated coastal area management. 275

185. In relation to fisheries, the priorities of FAO for 2012-2013 include furthering the implementation of an ecosystem approach to fisheries management and aquaculture. With regard to an ecosystem approach to fisheries management, special emphasis has been placed on African coastal States. In particular, in the context of the project “fisheries management-Nansen project entitled “Strengthening the knowledge base for and implementing an ecosystem approach to marine fisheries in developing countries”, a workshop on progress in implementing an ecosystem approach to fisheries was held in Accra in March 2011. 276 In addition, Angola, Namibia and South Africa are working together, under the auspices of the Benguela Current Commission, on two Ecosystem approach to fisheries management-Nansen projects in the region. 277 A comprehensive toolbox for the implementation of an ecosystem approach to fisheries management is expected to be completed by FAO this year. 278

186. In relation to the implementation of an ecosystem approach to aquaculture, FAO stressed that during the biennium 2012-2013, priority should be given to the implementation of the relevant provisions of the Code of Conduct for Responsible Fisheries, the recommendations contained in the 2010 Phuket Consensus 279 and the recommendations of the Subcommittee on Aquaculture of the FAO Committee on Fisheries. 280

187. At the regional level, the Regional Activity Centres of the Northwest Pacific Action Plan have compiled a regional overview on integrated coastal and river basin management. Further work on ecosystem evaluation, marine spatial planning and ecosystem-based management is expected to be carried out within the framework of integrated coastal and river basin management. 281 The Northwest Pacific Action Plan has also established a partnership with other regional projects, such as the Yellow Sea Large Marine Ecosystem Project. 282

188. A workshop on the ecosystem approach was held in Heringsdorf, Germany, on 23 September 2011 in the context of the tenth ScanBalt Forum, “10 Years ScanBalt BioRegion: towards a balanced regional development and smart specialization in the Baltic Sea region”. 283

C. Degradation of the marine environment from land-based activities

189. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities provides a non-binding framework and road map for addressing the approximately 80 per cent of marine pollution that comes from land-based sources at the global, regional and national levels. The third Intergovernmental Review Meeting of the Global Programme of Action will be held in January 2012. 284

190. During the period under review, there was significant progress in the implementation of the Global Programme of Action at the regional level. For example, the Protocol concerning Pollution from Land-based Sources and Activities to the Convention for the Protection, Management and Development of the Marine Environment and the Coastal Region of the Mediterranean also achieved the sixth ratifications required for entry into force in 2010. The Protocol on Integrated Coastal Zone Management in the Mediterranean to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean also

273 See ISBA/17/LTC/2 and ISBA/17/LTC/2; see also A/66/70, para. 117.


275 IOC contribution.

276 See www.eaf-nansen.org/.

277 The two projects, entitled “Integrating the human dimension of an ecosystem approach to fisheries into fisheries management in the BCC region” and “Implementing a process which allows the review (auditing) and tracking of an ecosystem approach to fisheries management”, started in July 2010; see www.eaf-nansen.org/nansen/topic/18209.en.

278 FAO contribution; see also A/66/70, para. 119.

279 Adopted at the Global Conference on Aquaculture, held in Phuket, Thailand, from 22 to 25 September 2010; see www.aquas-conference2010.org/.

280 FAO contribution.

281 UNEP contribution.

282 See http://partnership.iwlearn.org/.


284 See www.gpa.unep.org/.

285 See progress report on the implementation of decision SS.XI/7 on oceans (UNEP/GC.26/10), paras. 23-26.

192. In addition to its catastrophic human toll and economic consequences, the 11 March 2011 earthquake and tsunami off the coast of Japan, and the ensuing nuclear incident, resulted in the introduction of pollution from land-based sources into the marine environment. Studies have indicated that although radioactive material from the Fukushima nuclear power plant is likely to dissipate rapidly in the ocean, vigilance is recommended in order to monitor the possibility of bioaccumulation in marine living resources. Concern has also been expressed regarding the large amount of marine debris resulting from the tsunami, which might be transported across the oceans by currents.

D. Pollution from ships

1. Discharge of substances

193. International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), annex I (oil). Following a decision taken by the IMO Marine Environment Protection Committee in 2010, amendments to annex I to MARPOL 73/78 entered into force on 1 August 2011 to ban heavy fuel oil in the Antarctic. The amendments add a new chapter 9, on special requirements for the use or carriage of oils in the Antarctic area, and establish a ban on the use or carriage as cargo of heavy-grade oils in the Antarctic area, with exceptions for vessels engaged in securing the safety of ships or in a search and rescue operation.

194. MARPOL 73/78, annex IV (sewage). At its sixty-second session, the Marine Environment Protection Committee adopted amendments to annex IV to MARPOL 73/78 to include the possibility of establishing Special Areas for the prevention of pollution by sewage from passenger ships and to designate the Baltic Sea as a Special Area under the annex. The amendments are expected to enter into force on 1 January 2013.

195. MARPOL 73/78, annex V (garbage). At its sixty-second session, the Marine Environment Protection Committee adopted revised regulations for the prevention of pollution by garbage from ships. The amendments include a general prohibition on the discharge of garbage into the sea, except in accordance with regulations (e.g., food wastes and cargo residues), the addition of discharge requirements for animal carcasses, and the expansion of the requirements for placards and garbage management plans to fixed and floating platforms engaged in exploration and exploitation of the seabed. The amendments are expected to enter into force on 1 January 2013.

298 See http://marinedebris.noaa.gov/info/japanfaqs.html; for general information about recent developments relating to marine debris, see A/66/70/Add.1, paras. 340-344.
299 A/65/69/Add.2, para. 243.
300 Report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24), paras. 6.5-6.14 and 6.35-6.36.
301 Ibid.
201. In support of the work of the Marine Environment Protection Committee, IOC reported that the International Council for the Exploration of the Sea-IWC-IMO Working Group on Ballast and Other Ship Vectors had reviewed and recommended methodologies for monitoring compliance with regard to the treatment of ballast water. In cooperation with the IOC Intergovernmental Panel on Harmful Algal Blooms, the Working Group had developed advice on identifying species of phytoplankton that were more likely to have significant potential ecological or economic impact as invasive species. Advice had also been developed on whether there were particular characteristics of coastal waters that favoured the establishment of invasive phytoplankters.298

202. At the regional level, IOC reported that its Subcommission for the Western Pacific was carrying out research to review the regional status of marine non-indigenous species and to increase knowledge and awareness of the threats posed by marine invasive species to marine biodiversity in the region. The initiative would also provide a rapid assessment methodology to identify native, introduced and cryptogenic species present as fouling communities at identified sites of great probability of containing non-indigenous species.

203. **Biofouling of ships.** Minimizing biofouling will significantly reduce the risk of species transfer by vessels. A single fertile fouling organism has the potential to release into the water many thousands of eggs, spores or larvae with the capacity to found new populations of invasive species such as crabs, fish, sea stars, molluscs and plankton.299

204. Also at its sixty-second session, the Marine Environment Protection Committee adopted guidelines for the control and management of ships’ biofouling to minimize the transfer of invasive aquatic species. The guidelines constitute the first set of international recommendations to address biofouling of ships and the transfer of aquatic species through the adherence of sea life such as algae and molluscs to the hulls of ships.300

**F. Ocean noise**

205. There is a general recognition that human-generated underwater noise is a source of marine pollution and poses a threat to marine ecosystems and living resources.301

206. The General Assembly, in paragraph 107 of its resolution 61/222, requested the Division to compile studies that it received from States and intergovernmental organizations.302 During the reporting period, no studies were received by the Division.

207. The 2011 report of the scientific committee of the International Whaling Commission noted that there was considerable evidence that anthropogenic noise could affect beaked whales. It recommended the continuation and expansion of studies of how anthropogenic noise, especially from naval sonar and seismic survey airguns, affected ziphiids.303

208. At its sixty-first session, the Marine Environment Protection Committee identified propeller noise as the main source of ship-generated underwater noise, and agreed that future research programmes should focus on propeller noise and the relationship between cavitations and the cause of underwater sonic energy.304 This issue will be discussed further at the sixty-third session of the Committee, to be held in February 2012.305

209. At their fourth meeting, the parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and neighbouring Atlantic Area, in resolution 4.17,306 recognized the ongoing work of the correspondence working group on ocean noise, and reaffirmed the need to fully address that issue, as well as the need for transparency in the disclosure of approved activities conducted within the Agreement area that were known or likely to have an acoustical impact on the cetacean environment.307

210. At its seventeenth meeting, the Advisory Committee of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas established an open-ended intersessional working group on noise,308 the terms of reference of which were revised at the eighteenth meeting of the Committee, in May 2011.309

211. The OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic, at its ministerial meeting held in September 2010, adopted a renewed strategy for the joint assessment and monitoring programme for the period 2010-2014. The programme highlights underwater noise as a new and emerging problem in the marine environment, and envisages the development of a monitoring programme on the issue.310

**G. Waste management**

1. **Disposal of wastes**

212. At the thirty-second Consultative Meeting of Contracting Parties to the London Convention and the fifth Meeting of Contracting Parties to the London

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298 IOC contribution.
300 See report of the Marine Environment Protection Committee on its sixty-third session (MEPC 63/24).
301 General Assembly resolutions 60/30, para. 84; 61/222, para. 107; 62/15, para. 120; 63/111, para. 141; 64/71, para. 162; 65/37 A, para. 186; and 65/38, para. 127.
303 See report of the scientific committee of the International Whaling Commission (IWC/63/Rep1).
304 See report of the Marine Environment Protection Committee on its sixty-first session (MEPC 61/24).
305 See report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24).
306 A/66/70, para. 112.
307 See report of the fourth meeting of the contracting parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and neighbouring Atlantic Area.
308 See report of the seventeenth meeting of the Advisory Committee of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas.
309 See report of the eighteenth meeting of the Advisory Committee of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas.
310 Joint Assessment and Monitoring Programme 2010-2014 (OSPAR agreement 2010-4), available from www.ospar.org/content/content.asp?menu=00170301000000_000000_000000.
Protocol, held in October 2010, the contracting parties adopted a resolution regarding the Assessment Framework for Scientific Research Involving Ocean Fertilization. The resolution provides criteria for the completion of an environmental assessment, including risk management and monitoring. According to the resolution, “The Framework does not contain a threshold below which experiments would be exempt from its assessment provisions. It is intended that every experiment, regardless of size or scale, should be assessed in accordance with the entire Framework.”

213. At the meetings, it was agreed that further work should be undertaken intersessionally by the Working Group on Ocean Fertilization. The Working Group was expected to report on the outcome of its third meeting to the next session of the governing bodies, in October 2011, with the aim of establishing global, transparent and effective control and regulatory mechanisms for ocean fertilization activities and other activities falling within the scope of the London Convention and Protocol.

214. At their meeting, the contracting parties to the London Protocol adopted a workplan with timelines for conducting the review of the 2007 carbon dioxide sequestration guidelines in the light of the 2009 amendments to article 6 of the Protocol under resolution LP.3(4), and instructed the London Protocol Scientific Group to begin this review, aiming at its completion in 2012.

2. Transboundary movement of wastes

215. At the tenth Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, held in October 2011, the parties considered a draft strategic framework prepared by the secretariat of the Convention, taking into account comments from States parties and recommendations arising from a consultative meeting of experts held in 2011. The secretariat of the Basel Convention prepared a legal analysis of the application of the Convention to hazardous wastes and other wastes generated on board ships, which addressed the respective competencies of the Basel Convention and MARPOL 73/78 in respect of hazardous wastes and other wastes. The legal analysis concluded that the provisions of the Basel Convention relating to environmentally sound management did not apply as long as the wastes covered by MARPOL 73/78 were on board the ship, and that the Basel Convention provisions related to transboundary movements did not apply until the wastes were unloaded from the ship and a transboundary movement subsequently took place. A resolution on this matter was expected to be adopted at the tenth Conference of the Parties to the Basel Convention.

H. Ship breaking, dismantling, recycling and scrapping

217. In July 2011, at its sixty-second session, the Marine Environment Protection Committee adopted the 2011 guidelines for the development of the Ship Recycling Plan as well as updated guidelines for the development of the Inventory of Hazardous Materials, which are intended to assist in the implementation of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. The Committee encouraged Governments to ratify the Convention, which, as at 1 August 2011, had been signed, subject to ratification or acceptance, by five countries, and to review the programme of technical assistance aimed at supporting its early implementation.

218. IMO has clarified that parties must ensure that their ship recycling facilities comply with the Convention by providing plans that specify the method used to recycle each ship based on its particulars and inventory.

219. At the seventh session of the Open-ended Working Group of the Basel Convention, held in May 2010, parties considered the application of the Convention to ship recycling. These discussions were expected to continue at the tenth Meeting of the Conference of the Parties to the Convention, in October 2011. The secretariat of the Basel Convention will conduct two projects in support of the work under the Convention on ship dismantling. A case study will be produced on the development of compliant facilities for ship recycling, specifying operational, procedural and infrastructural developments to achieve compliance with both the Basel Convention and the Hong Kong Convention, and another study, expected in 2012, will identify cost-effective alternatives to the beaching methods of ship recycling.

I. Liability and compensation

220. The current international legal regime on liability and compensation for damage from pollution from ships and from the carriage of hazardous and noxious substances, hazardous wastes and nuclear material by sea is based on a number of

311 See report of the thirty-second consultative meeting and the fifth meeting of contracting parties (LC 32/15), available from www.ucl.ac.uk/llc/pdf/Protocol15.pdf.
314 See LC 32/15.
315 See LC 32/15.
316 See LC 32/15.
318 See LC 32/15, p. 4.
319 See UNEP/CHW/10/3, annex.
321 See UNEP/CHW. 10/1.
322 France, 19 November 2009; Italy, 2 August 2010; Netherlands, 21 April 2010; Saint Kitts and Nevis, 27 August 2010; and Turkey, 26 August 2010; see www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx.
323 See report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24).
324 See 2011 guidelines for the development of the ship recycling plan (MEPC 62/W.P.9), annex 2; see also report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24).
international instruments. To date, there has been no legally binding regime in force for pollution of the marine environment resulting from sources other than shipping activities. In that regard, at its ninety-seventh session, the IMO Legal Committee, in November 2010, considered the Deepwater Horizon (2010) and Montara (2009) incidents, and recommended that the Council amend the IMO strategic plan to accommodate liability and compensation for oil exploration and exploitation.

221. International Convention on Civil Liability for Bunker Oil Pollution Damage. At its ninety-seventh session, the IMO Legal Committee approved a draft resolution recommending that parties to the International Convention on Civil Liability for Bunker Oil Pollution Damage, inter alia, require ships with gross tonnage greater than 1,000 that fly their flag or traverse their facilities to be insured and hold a Bunkers Certificate even if the ship held a Civil Liability Convention certificate. The resolution was scheduled to be considered by the IMO Assembly at its twenty-seventh session, in November 2011.


225. Other liability regimes. In January 2011, at its second session, the intergovernmental negotiating committee tasked with preparing a legally binding instrument on mercury discussed liability and compensation initiatives. The new draft text provides for the adoption of liability and compensation measures for damage from transboundary movements of mercury wastes.

226. In October 2010, parties to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity adopted the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, which establishes international rules and procedures for liability and compensation for damage to biological diversity resulting from living modified organisms. The Supplementary Protocol is opened for signature from 7 March 2011 to 6 March 2012.

227. Emphasizing the need for a global nuclear liability regime, IAEA recommended accelerating the adoption of international instruments for civil liability on nuclear damage. In January 2011, the Agency published its International Legal Framework for Nuclear Security, which suggests that States requesting assistance for nuclear accidents provide compensation for environmental damage incurred during assistance.

J. Area-based management tools

228. Area-based management, as part of an array of management measures, is an important tool for the conservation and sustainable use of marine biodiversity and can have important benefits for sustainable development.

229. The Ad Hoc Open-ended Informal Working Group continued to consider issues related to area-based management beyond areas of national jurisdiction, including marine protected areas. Developments in other forums are briefly described below.

230. Ecologically or biologically significant marine areas in need of protection. The Conference of the Parties to the Convention on Biological Diversity, at its tenth meeting, in October 2010, established a process, including a series of workshops and the development of a repository, to facilitate the description of ecologically or biologically significant marine areas through the application of the scientific criteria set out in annex 1 to decision X/20. The Secretariat of the Convention is convening a series of regional workshops on identifying such areas in collaboration with parties and competent international and regional organizations. A joint scientific workshop of the OSPAR Commission, the North-East Atlantic Fisheries Commission and the secretariat of the Convention, on the identification of ecologically or biologically significant marine areas in the North-East Atlantic, was expected to be held in September 2011. Another workshop was scheduled for the Western South Pacific region in November 2011.

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231. The IOC-organized expert meeting on deep-water biodiversity in the South Atlantic had, among its objectives, the identification of potential ecologically or biologically significant marine areas in the South Atlantic.340

232. **Marine protected areas.** Owing to slow progress in the establishment of marine protected areas worldwide, including networks of such areas,341 new targets adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting, held in October 2010, called for the expansion of the global protected area network, including in marine areas. Under the new targets, 10 per cent of coastal and marine areas are to be conserved by 2020 through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider seascapes.342

233. As noted in *The Millennium Development Goals Report, 2011*, an expansion of sites will deliver benefits for biodiversity only if they are well managed and supported.343 A technical study by UNEP on the governance of marine protected areas concluded, inter alia, that in order to achieve a high level of effectiveness in meeting marine protected area objectives and making governance frameworks more resilient, different categories of incentives (economic, interpretative, knowledge-related, legal and participative) should be employed in a balanced and mutually supportive way, and that “top-down” and “bottom-up” approaches were not necessarily exclusive.344

234. The OSPAR Commission, at its meeting held in June 2011, endorsed the draft collective arrangement among competent authorities on the management of selected areas in areas beyond national jurisdiction within the OSPAR Maritime Area.345 The arrangement specifies, inter alia, that such cooperation should be based on the international legal framework for regulating activities in areas beyond national jurisdiction provided by the United Nations Convention on the Law of the Sea.346 A second informal meeting of competent authorities is scheduled for January 2012. With a view to resolving outstanding issues related to the governance framework of the northern part of the marine protected area originally proposed in the Charlie-Gibbs Fracture Zone, new terms of reference for the intersessional correspondence group on marine protected areas were adopted, including, if appropriate, the preparation of draft measures for the designation and management of the protected area for consideration by the OSPAR Biodiversity Committee in 2012.347

235. The Commission also considered the merits of a proposal to IMO for recently designated marine protected areas in the OSPAR Maritime Area to be designated as Particularly Sensitive Sea Areas or Special Areas, and agreed on further work to establish whether there was evidence to suggest that any of the OSPAR marine protected areas in areas beyond national jurisdiction were vulnerable to shipping impacts.348

236. The Commission for the Conservation of Antarctic Marine Living Resources, at its twenty-ninth meeting, held in October and November 2010, noted the discussions of the scientific committee on a process to develop a representative system of marine protected areas that could be applied to data-poor areas, while different approaches might be more appropriate in regions where sufficient data sets existed, such as the Ross Sea and the South Orkney Islands. It also endorsed the recommendation that the process for the designation of a marine protected area include the development of a research and monitoring programme, and that the development of a designation process and a monitoring plan be carried out in a stepwise fashion or that both processes be conducted simultaneously.349

237. The contracting parties to the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West, Central and Southern African Region, meeting in April 2011, adopted a decision on the development of a protocol concerning marine protected areas, in which a process for the development of such a protocol was defined. In addition, the contracting parties were urged to establish, expand or reinforce marine protected areas in areas under their jurisdiction.350

238. **Special Areas and Particularly Sensitive Sea Areas.** The Marine Environment Protection Committee, at its sixty-second session, in July 2011, adopted amendments to annex IV to MARPOL 73/78 (prevention of pollution by sewage from ships) to include the possibility of designating the Baltic Sea as a Special Area (see paragraph 194).351

239. The Committee also agreed to designate the Strait of Bonifacio (and, in principle, the Saba Bank in the Caribbean Sea) as a Particularly Sensitive Sea Area. The latter is expected to be finally designated at the sixty-fourth session of the Committee, in October 2012, following the approval of the proposed associated protective measures by the Subcommittee on Safety of Navigation.352

240. Following a decision taken by the Marine Environment Protection Committee in 2010, discharge requirements for the Wider Caribbean Region Special Area under annex V to MARPOL 73/78 (garbage) took effect on 1 May 2011.

241. **Emission control areas.** The Marine Environment Protection Committee adopted amendments to MARPOL 73/78 to designate certain waters adjacent to the coasts of Puerto Rico and the Virgin Islands as an emission control area (the United States Caribbean Sea Emission Control Area) for the control of emissions of nitrogen oxide from ships.353

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340 IOC contribution.
341 See decision X/29 of the Conference of the Parties to the Convention on Biological Diversity.
342 Ibid.; see also A/66/70, paras. 170-171.
344 See *Governing Marine Protected Areas: Getting the Balance Right* (UNEP, 2011); see also www.mpag.info/.
345 A/66/70, para. 174.
351 Report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24), paras. 6.5-6.14 and 6.36.
352 Ibid., paras. 9.1-9.12; see also www.imo.org/MediaCentre/PressBriefings/Pages/4%20MEPC62ENDS.aspx.
K. Sustainable use of non-living resources and development of marine renewable energy

1. Non-living resources

246. In response to concern over the Deepwater Horizon accident in the Gulf of Mexico, the 2010 ministerial meeting of the OSPAR Commission, held in September 2010 in Bergen, Norway, considered the issue of the prevention of significant oil pollution from offshore drilling activities in extreme conditions. Commission Ministers adopted a recommendation to, inter alia, review existing frameworks. 363

247. The International Oil Spill Prevention and Preparedness Conference, held in Portland, Oregon, United States, in May 2011, gathered oil spill response experts from around the world, contributing to and enabling a culture of preparedness within the oil spill community, the broader field of incident management, and society as a whole. 364

2. Marine renewable energy

248. Notwithstanding the fact that the oceans represent a viable source of renewable marine energy, the deployment of certain technologies in the marine environment may lead to environmental harm. 365

249. The IOC Subcommission for the Western Pacific is planning a regional workshop entitled “Research and development of marine renewable energy technologies”, scheduled to be held in November 2011 in Malaysia. The workshop will bring together regional experts, promoting the research and development of marine renewable technology by facilitating the establishment of a research and development network, assessing the current level of research, development and implementation of marine renewable energy technologies, disseminating the world’s best practice among member States in the Western Pacific region and further identifying the pilot projects among member States in this field. 367

250. For wave energy and tidal stream energy, the installed power was reported by several States as 2 MW and 4 MW, respectively, at the end of 2010. This technology was mainly in a demonstration phase of single units, with some of the deployments being short-duration testing programmes and a few prototypes initiating the first

353 Ibid., paras. 6.29-6.34 and 6.36.
354 A/65/69/Add.2, para. 302.
356 See http://whc.unesco.org/en/events/776/; at the time of writing, the report on the meeting was not available.
359 IOC contribution; the training course is available from www.oceanteacher.org.
steps towards the commercialization phase. Only tidal barrage systems had achieved commercial scale and provided the principal contribution to the global ocean energy installed power. 368

251. The fourth International Conference on Ocean Energy will be held in Dublin in October 2012. 369 In December 2010, the Small Island Developing States Sustainable Energy Initiative was launched to facilitate the development of a sustainable energy economy within the small island developing States, to increase energy efficiency by 25 per cent and to generate a minimum of 50 per cent of electric power from renewable sources by 2033. 370 The Informal Consultative Process will consider marine renewable energy as the topic of focus at its thirteenth meeting, in 2012.

L. Regional cooperation

252. UNEP, in partnership with the regional seas conventions and action plans, undertook the development of the Marine Biodiversity Assessment and Outlook Series. These assessments, contained in 19 regional reports, provide a perspective on the current state of marine biodiversity in the areas covered by the regional seas conventions and action plans, through a series of pressure and response indicators. 371

253. The global synthesis report highlights the need for cross-sectoral approaches to the management of the marine and coastal environment and for further action by parties to multilateral environment agreements and regional agreements, such as the regional seas conventions and action plans, to utilize these reports in setting long-, medium- and short-term management targets. The development and support of such management targets will require an improved information base for measuring progress in addressing pressures and the effectiveness of responses. 372

254. On 4 August 2011, UNEP issued an assessment showing that the environmental restoration of the oil-polluted Ogoniland (Nigeria) could prove to be the world’s most wide-ranging and long-term oil clean-up exercise ever undertaken. The clean-up will represent a major ecological restoration enterprise with potentially multiple positive effects, ranging from bringing the various stakeholders together to achieving lasting improvements for the Ogoni people. 373

1. Antarctic

255. The thirty-fourth Antarctic Treaty Consultative Meeting was held in Argentina in June and July 2011. 374 During the Meeting, the Committee for Environmental Protection considered environmental impacts associated with drilling into subglacial areas and revised the management plan for 10 Antarctic specially protected areas. By producing a manual of control techniques, the Committee continued to make progress in stopping the introduction of non-native species into the Antarctic. The Committee’s consideration of the proposed Jang Bogo station of the Republic of Korea has clearly demonstrated how sustainable energy, good waste management and imaginative design could lessen the human impact on Antarctica of scientific stations addressing some of the most important issues of global change. 375 Meeting participants also began to tackle the difficulty of assessing the risks posed by tsunamis, owing to the high number of research stations located in coastal areas.

256. The parties to the Antarctic Treaty adopted the Buenos Aires Declaration, thus marking the fiftieth anniversary of the entry into force of the Treaty. 376

2. The Arctic

257. The seventh ministerial meeting of the Arctic Council was held in Greenland in May 2011. The Council adopted an Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, 377 and identified the need for the prevention of, preparedness for and response to oil spills. A study had been released showing the impact of climate change on the Arctic. Another study had revealed that “soot” or black carbon, ground-level ozone and methane might account for up to 40 per cent of observed warming in the Arctic.

258. In its final Declaration, the Council decided to establish an Arctic ecosystem-based management group and a task force to develop an international instrument on Arctic marine oil preparedness and response, and to task senior arctic officials with considering ways in which to maximize the legacy of the International Polar Year, including through support for a proposal on an International Polar Decade in the light of the rapid change in the climate of the Arctic and the need for coordinated research. 378

259. A conference on arctic science, international law and climate protection was held in Berlin in March 2011 to discuss issues related to the dramatic changes in the Arctic that had resulted in the need for concerted monitoring and research. 379

3. Baltic Sea

260. The Baltic Marine Environment Protection Commission met on 14 June 2011 to discuss, inter alia, its overarching Baltic Sea Action Plan aimed at re-creating a healthy Baltic marine environment by 2021, and progress made in the review of environmental targets relating to eutrophication and in the review of the Baltic Sea monitoring programme. The Commission also considered a project proposal entitled “Managing fisheries in Baltic marine protected areas”. In addition, the Commission


371 UNEP contribution.

372 Ibid.


375 Ibid.

376 See www.ats.aq/documents/ATCM34/op/ATCM34_op031_rev1_e.pdf.


379 See A/65/912.
discussed progress in the reduction of pollution from several municipal and industrial hotspots.  

4. Black Sea  
261. The Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea against Pollution was expected to enter into force later in 2011. The draft biodiversity action plan was under revision.  
262. The collection of information on the development of policy and legal documents at the national level, as well as environmental data regarding the state of the Black Sea ecosystem and its coast quality checks, together with the exchange and dissemination of knowledge in this regard, remain among the basic tasks of the Black Sea Commission. An important report assessing the availability of data in the Black Sea region and their suitability for indicator-based reporting was produced with the financial support of the European Environment Agency. The final document, entitled “Diagnostic report to guide improvements to the regular reporting process on the state of the Black Sea environment”, was published.  
263. The Black Sea Commission continues to produce regular annual reports on land-based sources, in which major municipal industrial sources of pollution and river loads are evaluated in terms of how they contribute to the contamination of the Black Sea.  
264. The Commission is also participating in the project entitled “People for ecosystem-based governance in assessing sustainable development of ocean and coast”, aimed at the development of novel approaches to support integrated policies in the Mediterranean and Black Sea Basins.  
265. Recommendations on environmental impact assessments in a transboundary context for the Black Sea region have been formulated in cooperation with the secretariat of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context. The document will be submitted to the Black Sea Commission for national consultations and adoption.  

5. Caspian Sea  
266. The third Conference of the Parties to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea, held in August 2011 in Aktau, Kazakhstan, saw the adoption of two new Protocols to the Convention. The Protocol on Regional Preparedness, Response and Cooperation in Combating Oil Pollution Incidents will assist in protecting and preserving the Caspian Sea environment against the threats posed by oil pollution, including through the introduction of an emergency response system for dealing with oil pollution incidents. The Protocol on Environmental Impact Assessment in a Transboundary Context, once finalized, will introduce common rules for the assessment by States of any planned activities likely to have significant adverse effects on the marine environment; it will also require States to notify one another of such activities. In addition, a draft protocol for the protection of the Caspian Sea against pollution from land-based sources and activities and a draft protocol on the conservation of biological diversity were forwarded to the Governments of the Caspian States for internal approval, on 25 March and 15 April 2011, respectively.  
267. In the East Asian region, the need to enhance appropriate measures to counteract the impacts of climate change was highlighted at a workshop on climate change, sea-level rise and coastal erosion organized by the Coordinating Body on the Seas of East Asia, held in Bangkok in April 2011.  
268. The Partnerships in Environmental Management for the Seas of East Asia continued the implementation of the sustainable development strategy for the seas of East Asia, including by publishing, in January 2011, a magazine entitled Good Practices in Water Management and Climate Change. It emphasized, inter alia, the nexus among water, energy, food and the environment.  
269. In the South Asian Seas region, an outlook report prepared by the South Asia Cooperative Environment Programme was launched to contribute to discussions on marine and coastal biodiversity. The Programme has also developed a regional oil and chemical pollution contingency plan and an associated memorandum of understanding, in association with IMO.  

6. Mediterranean Sea  
270. The UNEP Mediterranean Action Plan has taken a series of actions to fulfil commitments enshrined in the Almeria Declaration and implement the Global Strategic Directions for the Regional Seas Programme 2008-2012.  
271. In March 2011, the Mediterranean Action Plan strengthened its legal framework with the entry into force of two Protocols aimed at addressing offshore pollution and coastal degradation threats, namely, the 1994 Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and Its Subsoil (Offshore
Protocol)\textsuperscript{392} and the 2008 Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol).\textsuperscript{393}

272. The Offshore Protocol is aimed at establishing an effective management system to protect the Mediterranean Sea from pollution resulting from exploration and exploitation of the continental shelf, the seabed and the subsoil. It establishes mutual assistance in case of emergency, and sets up a system of authorization, monitoring and strict liability. The ICZM Protocol provides tools for ensuring that human actions are undertaken with a concern for balancing economic, social and environmental goals and priorities in the long term. It also contains useful and innovative tools, such as the 100-metre no-building line, strategic environmental impact assessments, carrying capacity assessments and participatory planning approaches.\textsuperscript{394}

273. In preparation for the United Nations Conference on Sustainable Development, the Mediterranean Commission on Sustainable Development issued a report, entitled “The strengthening of national sustainable development strategies is key to a green economy transition in the Mediterranean”, following its meeting held in May and June 2011. The report stressed the need to strengthen national strategies for sustainable development, together with the need for a more effective regional institutional framework for sustainable development.\textsuperscript{395}

8. North-East Atlantic

274. The OSPAR Commission’s Quality Status Report 2010, which was launched at the ministerial meeting of the Commission held in September 2010, represents the culmination of 10 years of joint monitoring and assessment of the marine environment in the North-East Atlantic, and provides a basis for future decision-making in the region.\textsuperscript{396} The comprehensive assessment report examines all aspects of human influence on the sea, including climate change, eutrophication, hazardous substances, radioactive substances, the offshore oil and gas industry, fishing, and other human uses and impacts on biodiversity and ecosystems. The report assesses progress made through the implementation of Commission activities, identifies new and existing challenges, and recommends measures to be taken.

275. Key findings of the report include the following: climate change and ocean acidification are now evident, particularly in the North; a better understanding is needed of the combined pressures on the marine environment from activities relating to offshore renewable energy, mineral extraction, shipping, maritime and coastal defence reinforcement, all of which should be managed in an integrated manner; biodiversity continues to be heavily threatened; and fishing continues to have a large impact on marine ecosystems, despite the improved management of fisheries. The report also notes reductions in pollution from nutrient inputs, hazardous substances, radioactive discharges and oil and gas production, but indicates that more work is needed to tackle these issues.\textsuperscript{397} Key recommendations contained in the report include: the extension of the OSPAR network of marine protected areas, especially in key areas away from coasts; cooperation to promote sustainable fishing; and the development of policies aimed at mitigating climate change and acidification.\textsuperscript{398}

276. At its ministerial meeting, the OSPAR Commission adopted the Bergen Statement, which sets forth commitments regarding, inter alia, the application of an ecosystem approach; the coordinated implementation of the European Union Marine Strategy Framework Directive; addressing pollution and other adverse impacts of human activities; protecting marine areas, species and habitats; and responding to the challenges of a changing climate.\textsuperscript{399} It also adopted the North-East Atlantic Environment Strategy for the period 2010-2020, which provides a goal-based strategic framework for the Commission, including with respect to the application of the ecosystems approach and thematic areas such as biodiversity and ecosystems, eutrophication, hazardous substances, the offshore oil and gas industry, and radioactive substances.\textsuperscript{400}

277. On 24 November 2010, parties to the 1983 Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and other Harmful Substances (Bonn Agreement), adopted the Bonn Agreement Action Plan 2010-2013, which includes three strategic aims: (a) preventing illegal and accidental pollution through collaboration and collective contribution to the enforcement of maritime pollution rules and standards; (b) promoting and providing for efficient emergency preparedness; and (c) organizing optimum response capacities where and when necessary.\textsuperscript{401} The Action Plan also promotes a Bonn Agreement area-wide risk assessment that will take into account the environmental sensitivity of marine and coastal areas and adequate balances of resources for response work. In addition, the parties agreed to strengthen cooperation with the OSPAR Commission as regards pollution from shipping, offshore oil and gas operations and other maritime activities.\textsuperscript{402}

9. North-West Pacific

278. At the fifteenth intergovernmental meeting of the Northwest Pacific Action Plan, held in Moscow in November 2010, member States considered a draft medium-term strategy for the period 2012-2017.\textsuperscript{404} The draft strategy was expected

\textsuperscript{392} The Offshore Protocol has been ratified by Albania, Cyprus, the Libyan Arab Jamahiriya, Morocco, the Syrian Arab Republic and Tunisia.

\textsuperscript{393} The ICZM Protocol has been ratified by Albania, the European Union, France, Slovenia, Spain and the Syrian Arab Republic; see “Legal instruments reducing risks from offshore exploration activities and protecting the Mediterranean coasts’ degradation enter into force today”, 24 March 2011, available from www.unepmap.org/index.php/module-news&action=detail&id=110.

\textsuperscript{394} See ICZM Protocol, articles 8 and 16-21.


\textsuperscript{397} See http://qsr2010.ospar.org/en/media/content_pdf/ch00/Key_findings_EN.pdf.


\textsuperscript{402} See www.bonnagreement.org/eng/doc/PR_10_BONN_2010_final.pdf.

\textsuperscript{403} See www.bonnagreement.org/eng/html/DECLARATION.cfm.

\textsuperscript{404} See UNEP/NOWPAP/IG. 15/6; see also UNEP/NOWPAP/IG. 15/12, resolution 3.
to be given final approval at the sixteenth intergovernmental meeting of the Action Plan, to be held in China in late 2011.\textsuperscript{405}

279. The Northwest Pacific Action Plan is currently working on a second comprehensive review of marine environmental problems in the region.\textsuperscript{406} On the occasion of the 2010 International Year of Biodiversity, the Action Plan initiated activities related to the assessment of coastal and marine biodiversity in the region. It also updated and compiled previous data and information on marine and coastal biodiversity, marine protected areas and fishing fleets.\textsuperscript{407} The Action Plan is continuing work on ecosystem evaluation, marine spatial planning and ecosystem-based management to be carried out within the framework of integrated coastal and river basin management.

280. The Northwest Pacific Action Plan regional action plan on marine litter continues to be implemented in cooperation with various stakeholders, including at the local level.\textsuperscript{408} For example, in October 2010 the tenth annual Northwest Pacific Action Plan international coastal clean-up and workshop on marine litter was held in Jeju, Republic of Korea. The Action Plan has also undertaken a second regional overview of marine litter and the updating of its “Marine litter guidelines for tourists and tour operators in marine and coastal areas”, to be completed by 2011.\textsuperscript{409}

10. Pacific

281. In its recently adopted strategic plan for the period 2011-2015, the secretariat of the Pacific Regional Environment Programme identified four priorities for its work: climate change; biodiversity and ecosystem management; waste management and pollution prevention; and environmental monitoring and governance. For each priority, it set out agreed targets and goals to be achieved by 2015 by members of the Programme, in partnership with the secretariat.

282. With regard to biodiversity, the secretariat of the Programme organized a meeting entitled “Implementing the Nagoya outcomes: review and planning meeting”, held in Nadi, Fiji, in May 2011.\textsuperscript{410} The meeting was aimed at ensuring that the decisions adopted at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity, including with regard to the development of post-2010 strategic plan goals and targets, took into account the needs of small island developing States.

283. In the field of ecosystem management, at the end of 2010 several members of the Pacific Regional Environment Programme had reviewed their legislation on the protection of marine species in order to comply with the Programme’s regional marine species programme for the period 2008-2012.\textsuperscript{411} The year 2011 was declared the Pacific Year of the Dugong in order to promote conservation of this rare species of marine mammal and its sea grass habitats.

284. Finance and environment ministers from the Pacific met in July 2011 to discuss opportunities and challenges in the building of green economies in the region, in the first of a series of preparatory meetings for the United Nations Conference on Sustainable Development.\textsuperscript{412}

11. Red Sea and Gulf of Aden

285. In the context of the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden, a number of multidisciplinary training programmes and workshops were organized, including on the assessment and management of coastal hazards; pollution from land-based activities; adaptation to climate change impacts; the implementation of assessment and best available technology/best environment practices; and the climatology and climate variability of the Red Sea and Gulf of Aden large marine ecosystem.\textsuperscript{413}

286. The Regional Organization has partnered with the World Bank to develop a regional project on the strategic management of the Red Sea and Gulf of Aden.\textsuperscript{414} In April 2011, the second meeting of the regional working group responsible for establishing a port State control memorandum of understanding agreed on a final draft text.\textsuperscript{415}

287. The fourteenth meeting of the Ministerial Council of the Regional Organization, held in March 2011, approved the Regional Organization’s workplan and pollution prevention; and environmental monitoring and governance. For each priority, it set out agreed targets and goals to be achieved by 2015 by members of the Programme, in partnership with the secretariat.

288. With regard to biodiversity, the secretariat of the Programme organized a meeting entitled “Implementing the Nagoya outcomes: review and planning meeting”, held in Nadi, Fiji, in May 2011.\textsuperscript{410} The meeting was aimed at ensuring that the decisions adopted at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity, including with regard to the development of post-2010 strategic plan goals and targets, took into account the needs of small island developing States.

289. Together with IOC, the Permanent Commission developed, in April 2011, an ecosystem approach and the establishment of an integrated knowledge node.\textsuperscript{418}

12. South-East Pacific

288. The IX Assembly of the Permanent Commission for the South Pacific, meeting in November 2010, adopted strategic priorities for the period 2011-2014, which include issues relating to competitiveness for sustainable development, the implementation of an ecosystem approach and the establishment of an integrated knowledge node.\textsuperscript{418}

289. Together with IOC, the Permanent Commission developed, in April 2011, an assessment of early warning systems for tsunamis in the South-East Pacific. The third meeting of the regional plan of action for the conservation of sharks, rays and
chimaeras in the South-East Pacific was held in May 2011 to continue the implementation of this important regional conservation plan.419

13. Western, central and eastern Africa

290. A workshop to review the state of knowledge regarding the effects of climate change on coral reefs in the Western Indian Ocean region was held in April 2011 by the secretariat of the Nairobi Convention, the Wildlife Conservation Society and the Western Indian Ocean Marine Science Association with a view to identifying the areas that have the best environmental conditions to allow these reefs to survive climate change.420

291. The first meeting of the ad hoc legal and technical working group tasked with drafting a protocol to the Nairobi Convention concerning integrated coastal zone management was held in September 2010, followed by the second meeting of the working group, held in December 2010, at which a first draft of the protocol was developed.421 The third meeting of the working group was held in February 2011 to review the draft text.

292. A regional conference entitled “Climate change impacts, adaptation and mitigation in the Western Indian Ocean region: solutions to the crisis” was held in March 2011, as was a meeting of focal points of the Nairobi Convention to discuss the implementation of the UNEP Africa Marine and Coastal Programme.422 The seventh Conference of the Parties to the Nairobi Convention is scheduled for 2012.423

14. Wider Caribbean

293. Two new working groups, on reviewing lists of species protected under the Protocol concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region and on the exemptions to species protection, were established in February 2011 to assist with the implementation of the Protocol.424 The UNEP Caribbean Environment Programme, in collaboration with the UNEP Division of Environmental Policy Implementation and the Regional Activity Centre for the Protocol, convened a panel of experts in May 2011 for the first phase of a biodiversity initiative funded by the Government of Spain.425

M. Small island developing States

294. Small island developing States face numerous challenges in terms of, inter alia, economic development and environmental preservation. The greatest natural threats to their sustainable development are climate change and sea-level rise. This was acknowledged, in particular, in the outcome document adopted in New York in September 2010 at the high-level Five-Year Review of the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States.426

295. In preparation for the United Nations Conference on Sustainable Development, to be held in June 2012, a preparatory meeting of Small Island Developing States of the Atlantic, Indian Ocean, Mediterranean and South China Seas was held in the Seychelles in July 2011. At the meeting, it was recognized that small island developing States had inherent unique vulnerabilities that needed to be continuously addressed internationally. In this regard, a key aspect of the green economy for small island developing States was the transition to renewable energy in order to eliminate vulnerability to the price fluctuations of fossil fuels and dependency on costly imports, reduce negative environmental impacts and create economic opportunities. However, solar and tidal energy resources remained untapped, owing to high costs and limited research in small island developing States.427

296. Meeting participants noted the pressing need for capacity-building among small island developing States in relation to the law of the sea, in particular concerning the protection of their interests with regard to marine resources, the exclusive economic zone and areas beyond national jurisdiction. A project developed by IOC and the Department of Economic and Social Affairs, aimed at developing a monitoring and evaluation system for the implementation of the UNEP Africa Marine and Coastal Programme.422 The seventh Conference of the Parties to the Nairobi Convention is scheduled for 2012.423

297. While small island developing States have embarked on the development of integrated coastal management strategies, there is a need to support them in the implementation of those strategies.429 In response to the commitments set out in the Johannesburg Plan of Implementation,430 UNEP has continued to implement three main projects in the Caribbean, Pacific, Atlantic and Indian Oceans. These are: a project entitled “The management of watersheds and coastal areas in small island developing States”, aimed at developing capacity for an integrated approach to such management; and two projects, involving the implementation of sustainable integrated water resource and wastewater management in the Pacific island countries and in the Atlantic and Indian Ocean small island developing States. The latter projects are aimed, respectively, at promoting sustainable development through the Strategic Action Programme for International Waters of the Pacific Islands Region, and at addressing water and marine-related constraints and barriers through the development of integrated water resource management mechanisms and water use efficiency.431

419 Ibid.
420 See www.unep.org/NairobiConvention/Meetings/index.asp.
421 Ibid.
422 Ibid.
423 Ibid.
425 See www.cep.unep.org/meetings-events/ii-spaw-cop.
426 See General Assembly resolution 65/5; see also A/66/70/Add.1, sect. III.D.
427 See www.unescod2012.org/giz20/content/documents/AMIS%20%20R%i20%20Outcome%20document.pdf.
428 Ibid.
429 Contribution of the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.
431 UNEP contribution.
a demonstration programme to work with Governments in implementing such tools that will be aimed at maximizing carbon benefits through the sound ecosystem management of coastal and marine areas. In addition, UNEP would develop and disseminate policy advice and guidelines based on the latest scientific knowledge, through the United Nations Framework Convention on Climate Change and other international climate frameworks.\(^{440}\)

302. IOC reported that the Second International Symposium on the Effects of Climate Change on the World’s Oceans would be held in Yeosu, Republic of Korea, in May 2012.\(^{441}\) In addition, the Third Symposium on “The Ocean in a High-CO\(_2\) World” will be held in Monterrey, United States, in September 2012.\(^{442}\)

303. At the regional level, IOC is contributing to the assessment of the combined effects of climate change and marine pollution in the Mediterranean Sea. It organized an international workshop in Rabat in June 2011 on the accelerating impacts of climate change and human activities on the marine environment.\(^{443}\)

304. Ocean acidification. UNEP published a report on ocean acidification that highlighted the importance of the marine environment as a source of food and support for societies, and the effects that acidification of the world’s oceans might have on marine resources and the people who depended on them. The report recommended actions to mitigate ocean acidification, including determining the vulnerability to ocean acidification of communities dependent on marine resources, identifying species that were more flexible in the face of change and reducing other pressures on fish stocks in order to provide the best chances of success through, for example, marine spatial planning.\(^{444}\)

B. Mitigating the impact of climate change in the context of ocean-related activities

305. Efforts continue at the international level to mitigate the impact of climate change in the context of ocean-related activities, including by reducing greenhouse gas emissions from ships and sequestering carbon dioxide through ocean fertilization and capture and storage in sub-seabed geological formations.\(^{445}\)

1. Reduction of greenhouse gas emissions from ships

306. At the sixty-second session of the Marine Environment Protection Committee, in 2011, parties to annex VI to MARPOL agreed to adopt mandatory measures to reduce emissions of greenhouse gases from international shipping.\(^{446}\) The measures represent the first-ever mandatory global greenhouse gas reduction regime for an

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432 Resolution 65/57 A, para. 188.
437 Ibid.
439 UNEP contribution; see Blue Carbon: The Role of Healthy Oceans in Binding Carbon (UNEP, 2009); see also A/65/69/Add.2, para. 373.
international industry sector. The amendments add a new chapter 4 to annex VI on regulations regarding energy efficiency for ships in order to make mandatory, for new ships, the Energy Efficiency Design Index and, for all ships, the Ship Energy Efficiency Management Plan, both of which are currently voluntary. Other amendments add new definitions and requirements for survey and certification, including a format for an international energy efficiency certificate. The new chapter includes a regulation on the promotion of technical cooperation and transfer of technology relating to the improvement of the energy efficiency of ships. The regulations will apply to all ships of 400 gross tonnage and above, and are expected to enter into force on 1 January 2013. 447

307. The introduction of the Energy Efficiency Design Index for all new ships will mean that between 45 million and 50 million tons of carbon dioxide could be removed from the atmosphere annually by 2020, compared with "business as usual" and depending on the growth in world trade. For 2030, the reduction would be between 180 million and 240 million tons annually from the introduction of the Index. 448

308. The Marine Environment Protection Committee also agreed on a plan to continue the work on energy efficiency measures for ships, including the development of an Energy Efficiency Design Index framework for ship types and sizes and propulsion systems not covered by the current Index requirements, and the development of guidelines related to the Index and the Ship Energy Efficiency Management Plan. 449 Further consideration of market-based measures was deferred to the sixty-third session of the Committee in 2012.

2. Ocean fertilization and carbon sequestration

309. Ocean fertilization. At the thirty-fourth meeting of the Scientific Group of the London Convention and the fifth meeting of the Scientific Group of the London Protocol, held in 2011, the Scientific Groups considered progress in collating and analysing overviews of ocean fertilization science, in particular a report prepared by IOC, entitled “Ocean fertilization: a scientific summary for policymakers”, 450 and a report by the secretariat of the Convention on Biological Diversity, entitled “Scientific synthesis on the impacts of ocean fertilization on marine biodiversity”. 451 The IOC study found that experimental, small-scale iron additions to high-nutrient regions could greatly increase the biomass of phytoplankton and bacteria and the drawdown of carbon dioxide in surface water. However, it was not yet known how iron-based ocean fertilization might affect zooplankton, fish or sea-floor biota, and the magnitude of carbon export to the deep ocean was still uncertain. The study noted that estimates of the overall efficiency of atmospheric carbon dioxide uptake in response to iron-based ocean fertilization had decreased by 5 to 20 times over the past 20 years. Furthermore, large-scale fertilization could have unintended, and difficult-to-predict, impacts. 452

310. The Scientific Groups agreed that the overviews provided useful scientific information and described potential impacts of ocean fertilization; however, the studies did not provide guidance on how to apply the scientific information in the context of the ocean fertilization assessment framework. 453 The Scientific Groups agreed that the way forward would consist of a number of elements, including identifying other sources of relevance to its work on ocean fertilization, in particular the application of its assessment framework. 454

311. At its third meeting, the intersessional working group on ocean fertilization of the London Convention and the London Protocol continued work on the development of a global, transparent and effective control and regulatory mechanism for ocean fertilization activities and other activities within the scope of the Convention and Protocol that have the potential to cause harm to the marine environment. 455 The working group recommended that the contracting parties continue to develop the options for a global control and regulatory mechanism for ocean fertilization activities, including options to amend the Protocol to permit ocean fertilization activities, and that cooperation and the exchange of information concerning ocean fertilization issues continue with other relevant international entities, including the secretariat of the Convention on Biological Diversity. 456

312. Carbon sequestration. At the thirty-fourth meeting of the Scientific Group of the London Convention and the fifth meeting of the Scientific Group of the London Protocol, held in April 2011, the Scientific Groups received updates on experiences with carbon dioxide sequestration technologies and their application. 457 The Scientific Groups noted the decision, taken at the sixth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, held in Cancun, Mexico, in December 2010, that carbon dioxide capture and storage projects in geological formations were eligible as development mechanism project activities, provided that certain conditions were met. 458

C. Adapting to projected climate change

313. Greater attention has been given to the need for urgent measures to adapt to projected climate change, as emphasized in my previous reports. 459 For example, the new strategic plan adopted at the Conference of the Parties to the Convention on Biological Diversity held in 2010 set a target of 2015 for the minimization of the anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted by climate change or ocean acidification, so as to maintain their integrity and functioning. By 2020, ecosystem resilience and the contribution of biodiversity to

447 See report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24). The regulations provide for the waiver of the Energy Efficiency Design Index requirement for new ships of 400 gross tonnage and above in certain circumstances. See also www.imo.org/MediaCentre/MeetingSummaries/MEPC/Pages/MEPC-62nd-session.aspx.
448 See “EEDI — rational, safe and effective”, IMO, 15 July 2011.
449 See report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24); see also www.imo.org/MediaCentre/MeetingSummaries/MEPC/Pages/MEPC-62nd-session.aspx.
450 See LC/SG 34/INF.3; see also ioc-unesco.org/index.php?option=com_content&view=article&id=290:new-ocean-fertilization-publication.
451 See LC/SG 33/INF.2.
452 See LC/SG 34/INF.3; IO contribution.
453 See LC/32/15, paras. 3.7-3.10; see also LC/32/15, annexes 5 and 6.
454 See LC/SG 34/15, paras. 4.27.4 and annex 7.
455 LC 33/4, chaps. 4 and 5 and paras. 6.5 and 6.7.
456 LC 34/15, paras. 4.1-4.10.
457 LC 34/15, paras. 4.2; see also LC/SG 34/INF.2.
458 A/65/9/Add.2, paras. 386-392; A/66/70, paras. 102-106; and A/66/70/Add.1, paras. 204-207.
carbon stocks are to be enhanced through conservation and restoration, including the restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation.460

314. IOC reported that a project funded by the Global Environment Facility on adaptation to climate and coastal change in West Africa had met several objectives, including the establishment of a network of stakeholders in coastal adaptation and the development of communication materials. Some co-financing had been received, and consultations had started with countries and potential donors with a view to launching a second phase of the project.461

315. In cooperation with other partners, United Nations University convened an international workshop, entitled “Indigenous peoples, marginalized populations and climate change: vulnerability, adaptation and traditional knowledge”, in Mexico City in July 2011. The workshop brought together indigenous and marginalized populations, including from coastal communities, and scientific and policy experts in order to inform the fifth assessment report of the Intergovernmental Panel on Climate Change.462

XIII. Settlement of disputes

A. International Court of Justice

316. On 4 May 2011, the International Court of Justice rendered two judgments in the case concerning Territorial and Maritime Dispute (Nicaragua v. Colombia), rejecting the applications for permission to intervene filed by Costa Rica and Honduras, respectively, pursuant to article 62 of the Statute of the Court.463

B. International Tribunal for the Law of the Sea464

317. Case No. 19. On 4 July 2011, Panama instituted proceedings against Guinea-Bissau in a dispute regarding the merchant vessel Virginia G.

318. Case No. 18. On 24 November 2010, Saint Vincent and the Grenadines instituted proceedings against Spain in a dispute concerning the merchant vessel Louisa, and requested the International Tribunal for the Law of the Sea to order provisional measures. On 23 December 2010, the Tribunal delivered an order rejecting the request for provisional measures.

319. Case No. 17. On 1 February 2011, the Seabed Disputes Chamber of the Tribunal rendered an advisory opinion concerning the “Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area”. The advisory opinion was the first decision of the Seabed Disputes Chamber and the first advisory opinion submitted to it by the Council of the International Seabed Authority.465

320. Appointment of arbitrators under annex VII to the United Nations Convention on the Law of the Sea. On 25 March 2011, the President of the Tribunal appointed three arbitrators, Ivan Shearer (Australia), James Kateka (United Republic of Tanzania) and Albert Hoffmann (South Africa), to serve in the arbitral proceedings instituted in accordance with annex VII to the United Nations Convention on the Law of the Sea for the settlement of the dispute between Mauritius and the United Kingdom concerning the “marine protected area” related to the Chagos Archipelago. The President also appointed Ivan Shearer as President of the Arbitral Tribunal. These appointments were made in consultation with the parties to the dispute.

XIV. International cooperation and coordination

A. United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

321. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea held its twelfth meeting in New York from 20 to 24 June 2011, and focused its discussions on “[C]ontributing to the assessment, in the context of the United Nations Conference on Sustainable Development, of progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and addressing new and emerging challenges”.466 The report on the work of the Informal Consultative Process at the meeting (A/66/186) consists of the Co-Chairs’ summary of discussions, which includes issues that could benefit from attention within the framework of the 2012 United Nations Conference on Sustainable Development. At the request of the Informal Consultative Process, the report has been transmitted to the Co-Chairs of the Bureau for the Preparatory Process of the Conference.

322. The topic of focus for the next meeting of the Informal Consultative Process, to be held in 2012, is “marine renewable energies”. In accordance with paragraph 227 of its resolution 65/37 A, the General Assembly will, at its sixty-seventh session, further review the effectiveness and utility of the Informal Consultative Process.

B. Regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects

323. Pursuant to General Assembly resolution 64/71, the Ad Hoc Working Group of the Whole to recommend a course of action on the regular process for global reporting and assessment of the state of marine environment, including

460 See decisions X/2, annex, and X/33 of the Conference of the Parties to the Convention on Biological Diversity.

461 IOC contribution.


463 See www.icj-cij.org.

464 See www.itlos.org.


466 General Assembly resolution 65/37 A, para. 231; the report prepared by the Secretary-General on the topic of focus is contained in document A/66/70/Add.1.
socio-economic aspects, met from 30 August to 3 September 2010 with a view to making recommendations to the General Assembly at its sixty-fifth session. 467

324. Subsequently, the first meeting of the Ad Hoc Working Group was held from 14 to 18 February 2011, pursuant to paragraph 203 of resolution 65/37 A. On 15 March 2011, the General Assembly, in its decision 65/545, requested the Ad Hoc Working Group to submit a report on its first meeting to the General Assembly at its sixty-fifth session. 468

325. In its resolution 65/37 B, the General Assembly endorsed the recommendations adopted by the Ad Hoc Working Group, and requested the Secretary-General to convene the second meeting of the Ad Hoc Working Group on 27 and 28 June 2011 to address outstanding issues identified in the report on the first meeting, with a view to enabling the first cycle of the first global integrated assessment to proceed, and to provide recommendations to the General Assembly for consideration at its sixty-sixth session. 469

326. In line with the recommendation, made by the Ad Hoc Working Group at its second meeting, that workshops be organized at the earliest possible opportunity in order to inform the first cycle of the regular process, Chile offered to host a workshop in Santiago in September 2011.

D. Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

330. The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection held its thirty-eighth session in Monaco in May 2011.

331. Five working groups were most active on the following issues: the evaluation of the hazards of harmful substances carried by ships; the review of applications for "active substances" to be used in ballast water management systems; metals in the marine environment, including mercury; the atmospheric input of chemicals to the oceans; and the establishment of trends in global pollution in the coastal environment.

332. With regard to new and emerging issues, the Joint Group of Experts discussed the issue of "biomagnification", which occurs when persistent organic pollutants accumulate through the food chain of top predators. The Joint Group of Experts highlighted the fact that the impact of food contaminants on human health and concerns for food security had increased the urgency of addressing this issue. An independent multidisciplinary global assessment involving multi-stakeholders could help to inform policymakers. At a workshop of the Joint Group of Experts on "Microplastic particles as a vector in transporting persistent, bioaccumulating and toxic substances in the oceans", workshop participants recognized that there was a limited knowledge on the issue and concluded that there was a need for such an assessment. 472

XV. Capacity-building activities of the Division for Ocean Affairs and the Law of the Sea

333. The Division for Ocean Affairs and the Law of the Sea continued to carry out capacity-building activities, mainly through the management of fellowship programmes, trust funds and, upon request, training or seminar events (see below). The Division also continued to compile information on the capacity-building activities of international organizations, donor agencies and States, as available and appropriate. Relevant information has been reflected in my previous reports on oceans and the law of the sea. 473 Following a request made by the General Assembly in paragraph 3 of its resolution 65/37 B, the Division with the assistance of the Group of Experts on the Regular Process, prepared, on a preliminary basis, an inventory of capacity-building for assessments and types of experts for

467 See A/65/358.
468 A/65/545.
469 See A/66/189.
470 When finalized, the report on the ninth meeting of UN-Oceans will be available from www.oceansatlas.org/www.un-oceans.org/index.htm.
471 A/64/66/Add.2, para. 171.
472 See Reports and Studies No. 82 (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, 2010).
473 See, for example, A/63/342.
workshops.  All published reports and studies were made available on the website of the Division.

A. Hamilton Shirley Amerasinghe Memorial Fellowship on the Law of the Sea

334. In June 2011, Ms. Sri Asih Roza Nova of Indonesia was awarded the twenty-fourth Hamilton Shirley Amerasinghe Memorial Fellowship on the Law of the Sea. Ms. Roza Nova is expected to commence her studies under the research phase of the Fellowship in the latter part of 2011 at the Centre for International Law of the National University of Singapore. She will then continue with a two-month practicum at the Division.

335. In 2011, contributions to the Fellowship fund were made by Argentina, Cyprus, Finland, Ireland, Monaco and Slovenia. As at 31 July 2011, the balance of the Fellowship fund was approximately $53,000.00. The total disbursements to be made from the Fellowship fund to finance the twenty-fourth awardee are estimated to be $45,000.00. Thus, without additional contributions, the Fellowship fund will be unable to defray the costs associated with the twenty-fifth Fellowship award to be made in 2012. Accordingly, an appeal to Member States and others in a position to do so is hereby made to contribute generously to the further development of the Fellowship to ensure that it is awarded every year.

336. The Division continues to undertake fund-raising initiatives which have included a side event at the twelfth meeting of the Informal Consultative Process, in June 2011. In addition, it has sent a number of communications to Member States and private institutions seeking contributions.

B. The United Nations-Nippon Foundation of Japan Fellowship Programme

337. The Division administers the United Nations-Nippon Foundation of Japan Fellowship Programme. It provides capacity-building opportunities to developing States through an advanced nine-month fully funded research fellowship in partnership with more than 40 leading academic institutions worldwide. Successful candidates develop customized research programmes in the field of ocean affairs and the law of the sea, and related disciplines including marine science, so as to better contribute to the development and implementation of maritime programmes. Application to the Fellowship is open to qualified Government officials and other mid-level professionals from developing States. Since its inception in 2004, the Programme has made 70 awards to individuals from 54 States. Currently, individuals from the following States are completing the Fellowship Programme: Azerbaijan, Djibouti, Guatemala, Mexico, Namibia, Nigeria, Oman, Peru, Thailand and Yemen.

C. Trust funds

1. Commission on the Limits of the Continental Shelf

338. Voluntary Trust Fund for the purpose of facilitating the preparation of submissions to the Commission on the Limits of the Continental Shelf for developing States, in particular the least developed countries and small island developing States, and compliance with article 76 of the United Nations Convention on the Law of the Sea. During the reporting period, contributions to the Trust Fund were received from Australia, Iceland and Ireland. According to the statement of accounts, the Trust Fund balance at the end of July 2011 was approximately $1,228,572.12. During the period under review, a grant agreement was concluded with Vanuatu.

339. Voluntary Trust Fund for the purpose of defraying the cost of participation of the members of the Commission on the Limits of the Continental Shelf from developing States in the meetings of the Commission. During the reporting period, contributions to the Trust Fund were received from China, Iceland, Ireland, Japan, Mexico and the Republic of Korea. At the twenty-first meeting of States parties, Japan made a pledge for a future contribution. According to the statement of accounts, the Trust Fund balance at the end of July 2011 was estimated to be $619,703.45. Assistance from the Trust Fund was provided to six members of the Commission to facilitate their participation in the twenty-seventh and twenty-eighth sessions of this body, while assistance was provided to three members for the resumed twenty-seventh session.

2. Voluntary Trust Fund for the purpose of assisting developing countries, in particular least developed countries, small island developing States and landlocked developing States, in attending meetings of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

340. During the period under review, representatives from the following eight countries, including three panelists, received assistance from the Trust Fund in the form of airline tickets to enable them to attend the twelfth meeting of the Informal Consultative Process, in June 2011, in accordance with General Assembly resolution 62/215: Bahamas, India, Jamaica, Madagascar, Nigeria, Palau, Thailand and Togo. According to the statement of accounts for the period ended in July 2011, the Trust Fund balance was estimated at $29,336.00.

341. There have been no applications to the Voluntary Trust Fund since the submission of an application by Guinea-Bissau in 2004. A contribution to the Trust Fund was received from Finland in 2010. As at 29 July 2011, according to the statement of accounts, the Trust Fund balance was estimated at $160,820.95.

4. Voluntary Trust Fund for the Regular Process for global reporting and assessment of the state of the marine environment, including socio-economic aspects

342. During the period under review, a contribution was made by Iceland, in 2010. In 2011, contributions were received from Jamaica, New Zealand and the Republic
of Korea. According to the statement of accounts for the period ended in July 2011, the Trust Fund balance was estimated at $12,730.00.

5. Assistance Fund under Part VII of the United Nations Fish Stocks Agreement

343. In accordance with the financial report of FAO on the status of the Assistance Fund under Part VII of the United Nations Fish Stocks Agreement, as at 31 December 2010, the contributions made to the Fund, together with accrued interest, totaled $58,057.00. The total expenditures of the Fund, including unliquidated commitments, amounted to $984,045.00. In June 2011, Australia made a contribution in the amount of A$500,000.00.

344. In 2010, 35 applications were funded and the total expenditure from the Fund was $316,398.00. The breakdown of that expenditure was as follows: 46 per cent supported capacity-building activities through three regional workshops, addressing (a) the management of tuna data, (b) tuna stock assessment, ecosystem and bycatch, and (c) port State measures; 41 per cent supported participation in sessions of fisheries management organizations and arrangements; 10 per cent supported participation in meetings of global organizations; and 3 per cent supported administrative costs.

XVI. Conclusions

345. Oceans are vital to humankind. They sustain billions of people around the world through, inter alia, the provision of food, shelter, energy, transportation, employment and recreation. The oceans also play a critical role in providing ecosystem services such as the regulation of the global climate and the oxygen cycle. Safe, healthy and productive seas and oceans are thus integral to human well-being, economic security and sustainable development.

346. The pace of economic and social developments in many countries has resulted in greater pressure on marine living and non-living resources.

347. Many coastal States are turning increasingly to the oceans and seas for additional supplies of food, minerals and energy, in particular oil and gas, but also clean renewable energy, such as geothermal, tidal and wave energy.

348. Marine ecosystems are fragile and vulnerable. They are affected by, among other things, unsustainable fishing; increased human population in coastal areas, with the consequent pollution from land-based sources; the destruction of productive habitats such as coral reefs; oil spills; alien invasive species; and the impacts of climate change, such as rising sea levels, ocean acidification, the melting of polar ice and shifts in the distribution of marine species.

349. There is, therefore, an urgent need to step up efforts to protect important marine habitats and ecosystem functions. Adopting a precautionary approach, ecosystem-based mitigation and adaptation strategies, and sound management would help to ensure that key components of marine ecosystems remain resilient to the cumulative impacts of those pressures. In particular, the marine environment is also vulnerable to the catastrophic impacts of natural disasters, such as tsunamis. Events such as these constantly remind us of the acute need for robust early warning systems, as well as the benefits of effective notification systems and contingency plans to ensure that damage or hazards are not transferred, directly or indirectly, from one area to another, and the acute need for measures to reduce and control pollution of the marine environment.

350. The international community continues to demonstrate its resolve and commitment to improve the plight of our oceans, in accordance with the United Nations Convention on the Law of the Sea; as shown in the present report.

351. Delineating and delimiting maritime jurisdictions and exercise of sovereignty, and sovereign rights in accordance with international law are crucial for the rule of law in oceans and for ensuring that States benefit fully from the use of ocean resources. Many States have made great progress in that regard by establishing precise boundaries of maritime zones. A large number of coastal States have made submissions to the Commission on the Limits of the Continental Shelf with regard to the outer limits of their continental shelves beyond 200 nautical miles. Such submissions, prepared at a considerable cost, must be addressed by the Commission effectively and expeditiously.

352. At the same time, additional progress needs to be made in relation to the resolution of disputes concerning maritime boundary delimitation, in particular of those disputes with a potential to become sources of tension and conflict. The Convention provides a sound basis for such situations, including through mechanisms for the settlement of disputes, and the obligation of Parties to seek, in the case of the delimitation of the exclusive economic zone and the continental shelf, provisional arrangements of a practical nature. States, in particular States parties, should strive to avail themselves to the fullest extent possible of the provisions of the Convention in this regard, as well as of the potential of international judicial bodies, such as the International Tribunal for the Law of the Sea and the International Court of Justice.

353. As the General Assembly expands its activities in the context of its overview of matters relating to ocean affairs and the law of the sea, the Secretariat continues to receive additional requests for support and assistance, including in capacity-building and meeting servicing. The capacity of the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs to adequately address these requests and to continue to provide high-quality output to Member States is thus coming under considerable pressure.

354. With respect to voluntary support for ocean-related activities, of the seven trust funds managed by the Division, three have been having chronically low balances and are in danger of not being fully viable: the Regular Process Trust Fund (TME), the Informal Consultative Process Trust Fund (KEA) and the Fellowship Trust Fund (TLA/HSA, Project 9681). Identifying adequate ways to address increasing requests with scarce resources would seem to require particular attention during the annual consideration of the agenda item “Oceans and the law of the sea”.

355. The peaceful uses of our oceans and seas have been challenged in recent years by a surge in acts of piracy and armed robbery at sea, in particular off the coast of Somalia. These continue to pose a threat to the lives and safety of seafarers as well as to international shipping and trade. The increased geographic reach of piracy off the coast of Somalia, together with the use of violence against seafarers, underlines the need for urgent and effective responses at all levels. This includes a continued increase in the number of States criminalizing piracy under their domestic law, and building the capacity of judicial institutions and infrastructure in Somalia and other...
States in the region. Furthermore, the international community needs to continue to develop measures to address the underlying causes of piracy and armed robbery at sea.

356. The trafficking and smuggling of people and illegal drugs by sea, as well as related criminal activities, also continue to endanger human lives and peace and security in the oceans. Strategies need to be put in place to strengthen search-and-rescue regimes in order to effectively address the irregular migration of people by sea, which is resulting increasingly in loss of lives.

357. In order to ensure the rule of law in the oceans, States that have not yet done so should consider becoming parties to the United Nations Convention on the Law of the Sea and the two implementing Agreements. With two new States parties to the Convention and to the Agreement relating to the implementation of its Part VI, the goal of universal participation has moved yet closer.

358. The year 2012 will mark the thirtieth anniversary of the opening for signature of the United Nations Convention on the Law of the Sea. In the assessment of the status of the implementation of the Convention and its related Agreements on that occasion, including the challenges in its application at the national and regional levels, the overarching significance of the Convention for the strengthening of international peace and security, international cooperation, and sustainable development of the oceans and seas should not be underestimated.

359. The year 2012 will also be very important for yet another reason. The United Nations Conference on Sustainable Development will meet in Rio de Janeiro, marking the twentieth anniversary of the 1992 United Nations Conference on Environment and Development and the tenth anniversary of the 2002 World Summit on Sustainable Development. The sustainable development of our oceans should be at the heart of the deliberations at the Conference. This event will provide a unique opportunity to take stock of our achievements to date, issues still in need of attention and the challenges that lie ahead in order to ensure that our oceans are healthy, safe and secure and that they benefit future generations.

360. Yet another opportunity to keep the oceans issues high on the agenda will be the Expo to be held in Yeosu, Republic of Korea, in 2012, the theme of which will be “The living ocean and coasts”.

361. As we prepare for 2012, it is essential that we consider what further actions are needed in relation to ocean affairs and the law of the sea, including with a view to strengthening the legal and institutional framework governing our oceans, to ensure that all activities and policies related to oceans and the marine environment acknowledge and incorporate the three pillars of sustainable development: environmental, social and economic. Only then can the development objectives set by the international community be achieved, as I noted on the occasion of the 2011 World Oceans Day.
International Tribunal for the Law of the Sea

Dispute concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)

Judgment of 14 March 2012
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Entitlement

Entitlement and delimitation

Meaning of natural prolongation

Determination of entitlements

Delimitation of the continental shelf beyond 200 nautical miles

Delimitation line

“Grey area”
Present: President JESUS; Vice-President TÜR; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRASEKHARA RAO, AKL, WOLFRUM, TREVES, NDIAYE, COT, LUCKY, PAWLAK, YANAI, KATEKA, HOFFMANN, GAO, BOUGUETAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN; Registrar GAUTIER.

In the Dispute concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal

between

The People’s Republic of Bangladesh,

represented by

H.E. Ms Dipu Moni, Minister of Foreign Affairs,

as Agent;

Mr Md. Khurshed Alam, Rear Admiral (Ret’d), Additional Secretary, Ministry of Foreign Affairs,

as Deputy Agent;

and

H.E. Mr Mohamed Mijraul Quayes, Foreign Secretary, Ministry of Foreign Affairs,

H.E. Mr Mosud Mannan, Ambassador of the People’s Republic of Bangladesh to the Federal Republic of Germany,

Mr Payam Akhavan, Professor of International Law, McGill University, Canada, Member of the Bar of New York, United States of America,

Mr Alan Boyle, Professor of International Law, University of Edinburgh, Member of the Bar of England and Wales, United Kingdom,

Mr James Crawford, S.C., F.B.A., Whewell Professor of International Law, University of Cambridge, United Kingdom, Member of the Bar of England and Wales, United Kingdom, Member of the Institut de droit international,

Mr Lawrence H. Martin, Foley Hoag LLP, Member of the Bars of the United States Supreme Court, the Commonwealth of Massachusetts and the District of Columbia, United States of America,

Mr Lindsay Parson, Director, Maritime Zone Solutions Ltd., United Kingdom,

Mr Paul S. Reichter, Foley Hoag LLP, Member of the Bars of the United States Supreme Court and the District of Columbia, United States of America,
and

The Republic of the Union of Myanmar,

represented by

H.E. Mr Tun Shin, Attorney General,

as Agent;

Ms Hla Myo Nwe, Deputy Director General, Consular and Legal Affairs Department, Ministry of Foreign Affairs,
Mr Kyaw San, Deputy Director General, Attorney General’s Office of the Republic of the Union of Myanmar,

as Deputy Agents;

and

Mr Mathias Forteau, Professor, University of Paris Ouest, Nanterre La Défense, France,
Mr Coalter Lathrop, Attorney-Adviser, Sovereign Geographic, Member of the North Carolina Bar, United States of America,
Mr Daniel Müller, Consultant in Public International Law, Researcher, Centre de droit international de Nanterre (CEDIN), University of Paris Ouest, Nanterre La Défense, France,
Mr Alain Pellet, Professor, University of Paris Ouest, Nanterre La Défense, France, Member and former Chairman of the International Law Commission, Associate Member of the Institut de droit international,
Mr Benjamin Samson, Researcher, Centre de droit international de Nanterre (CEDIN), University of Paris Ouest, Nanterre La Défense, France,
Mr Eran Sthoeger, LL.M., New York University School of Law, United States of America,
Sir Michael Wood, K.C.M.G., Member of the English Bar, United Kingdom, Member of the International Law Commission,

as Counsel and Advocates;

H.E. Mr U Tin Win, Ambassador Extraordinary and Plenipotentiary of the Republic of the Union of Myanmar to the Federal Republic of Germany,
Mr Min Thein Tint, Captain, Commanding Officer, Myanmar Naval Hydrographic Center,
Mr Thura Oo, Pro-Rector of the Meiktila University, Myanmar,
Mr Maung Maung Myint, Counselor, Embassy of the Republic of the Union of Myanmar to the Federal Republic of Germany,
Mr Kyaw Htin Lin, First Secretary, Embassy of the Republic of the Union of Myanmar to the Federal Republic of Germany,
Ms Khin Oo Hlaing, First Secretary, Embassy of the Republic of the Union of Myanmar to the Kingdom of Belgium,
THE TRIBUNAL,

composed as above,

after deliberation,

delivers the following Judgment:

I. Procedural history

1. The Minister of Foreign Affairs of the People’s Republic of Bangladesh, by a letter dated 13 December 2009, notified the President of the Tribunal that, on 8 October 2009, the Government of Bangladesh had instituted arbitral proceedings against the Union of Myanmar (now the Republic of the Union of Myanmar, see paragraph 18) pursuant to Annex VII of the United Nations Convention on the Law of the Sea (hereinafter "the Convention") “to secure the full and satisfactory delimitation of Bangladesh’s maritime boundaries with […] Myanmar in the territorial sea, the exclusive economic zone and the continental shelf in accordance with international law”. This letter was filed with the Registry of the Tribunal on 14 December 2009.

2. By the same letter, the Minister of Foreign Affairs of Bangladesh notified the President of the Tribunal of declarations made under article 287 of the Convention by Myanmar and Bangladesh on 4 November 2009 and 12 December 2009, respectively, concerning the settlement of the dispute between the two Parties relating to the delimitation of their maritime boundary in the Bay of Bengal. The letter stated:

[Given Bangladesh’s and Myanmar’s mutual consent to the jurisdiction of ITLOS, and in accordance with the provisions of UNCLOS Article 287(4), Bangladesh considers that your distinguished Tribunal is now the only forum for the resolution of the parties’ dispute.

On that basis, the Minister of Foreign Affairs of Bangladesh invited the Tribunal “to exercise jurisdiction over the maritime boundary dispute between Bangladesh and Myanmar”.

3. The declaration of Myanmar stated:

In accordance with Article 287, paragraph 1, of the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the Government of the Union of Myanmar hereby declares that it accepts the jurisdiction of the International Tribunal for the Law of the Sea for the settlement of dispute between the Union of Myanmar and the People’s Republic of Bangladesh relating to the delimitation of maritime boundary between the two countries in the Bay of Bengal.

4. The declaration of Bangladesh stated:

Pursuant to Article 287, paragraph 1, of the 1982 United Nations Convention on the Law of the Sea, the Government of the People’s Republic of Bangladesh declares that it accepts the jurisdiction of the International Tribunal for the Law of the Sea for the settlement of the dispute between the People’s Republic of Bangladesh and the Union of Myanmar relating to the delimitation of their maritime boundary in the Bay of Bengal.

5. In view of the above-mentioned declarations, and the letter of the Minister of Foreign Affairs of Bangladesh dated 13 December 2009 referred to in paragraphs 1 and 2, the case was entered in the List of cases as Case No. 16 on 14 December 2009. On that same date, the Registrar, pursuant to article 24, paragraph 2, of the Statute of the Tribunal (hereinafter “the Statute”), transmitted a certified copy of the notification made by Bangladesh to the Government of Myanmar.

6. By a letter dated 17 December 2009, the Registrar notified the Secretary-General of the United Nations of the institution of proceedings. By a note verbale dated 22 December 2009, the Registrar also notified the States Parties to the Convention, in accordance with article 24, paragraph 3, of the Statute.
7. By a letter dated 22 December 2009, the Minister of Foreign Affairs of Bangladesh, acting as Agent in the case, informed the President of the Tribunal of the designation of Mr Md. Khurshed Alam, Additional Secretary, Ministry of Foreign Affairs, as the Deputy Agent of Bangladesh. By a note verbale dated 23 December 2009, the Ministry of Foreign Affairs of Myanmar informed the Tribunal of the appointment of Mr Tun Shin, Attorney General, as Agent, and Ms Hla Myo Nwe, Deputy Director General, Ministry of Foreign Affairs, and Mr Nyan Naing Win, Deputy Director, Attorney General’s Office, as Deputy Agents. Subsequently, by a letter dated 24 May 2011, the agent of Myanmar informed the Tribunal that Myanmar had appointed Mr Kyaw San, Deputy Director General, Attorney General’s Office, as Deputy Agent in place of Mr Nyan Naing Win.

8. By a letter dated 14 January 2010, the Ambassador of Myanmar to Germany transmitted a letter from the Minister of Foreign Affairs of Myanmar of the same date, in which Myanmar informed the Registrar that it had “transmitted the Declaration to withdraw its previous declaration accepting the jurisdiction of ITLOS made on 4 November 2009 by the Minister of Foreign Affairs of Myanmar, to the Secretary-General of the United Nations on 14th January 2010”. On the same date, the Registrar transmitted a copy of the aforementioned letters to Bangladesh.

9. In a letter dated 18 January 2010 addressed to the Registrar, the Deputy Agent of Bangladesh stated that Myanmar’s withdrawal of its declaration of acceptance of the Tribunal’s jurisdiction did “not in any way affect proceedings regarding the dispute that have already commenced before ITLOS, or the jurisdiction of ITLOS with regard to such proceedings”. In this regard, Bangladesh referred to article 287, paragraphs 6 and 7, of the Convention.

10. Consultations were held by the President with the representatives of the Parties on 25 and 26 January 2010 to ascertain their views regarding questions of procedure in respect of the case. In this context, it was noted that, for the reasons indicated in paragraph 5, the case had been entered in the List of cases as Case No. 16. The representatives of the Parties concurred that 14 December 2009 was to be considered the date of institution of proceedings before the Tribunal.

11. In accordance with articles 59 and 61 of the Rules of the Tribunal (hereinafter “the Rules”), the President, having ascertained the views of the Parties, by Order dated 28 January 2010, fixed the following time-limits for the filing of the pleadings in the case: 1 July 2010 for the Memorial of Bangladesh and 1 December 2010 for the Counter-Memorial of Myanmar. The Registrar forthwith transmitted a copy of the Order to the Parties. The Memorial and the Counter-Memorial were duly filed within the time-limits so fixed.

12. Pursuant to articles 59 and 61 of the Rules, the views of the Parties having been ascertained by the President, the Tribunal, by Order dated 17 March 2010, authorized the submission of a Reply by Bangladesh and a Rejoinder by Myanmar and fixed 15 March 2011 and 1 July 2011, respectively, as the time-limits for the filing of those pleadings. The Registrar forthwith transmitted a copy of the Order to the Parties. The Reply and the Rejoinder were duly filed within the time-limits so fixed.

13. Since the Tribunal does not include upon the bench a member of the nationality of the Parties, each of the Parties availed itself of its right under article 17 of the Statute to choose a judge ad hoc. Bangladesh, by its letter dated 13 December 2009 referred to in paragraph 1, chose Mr Vaughan Lowe and Myanmar, by a letter dated 12 August 2010, chose Mr Bernard H. Oxman to sit as judges ad hoc in the case. No objection to the choice of Mr Lowe as judge ad hoc was raised by Myanmar, and no objection to the choice of Mr Oxman as judge ad hoc was raised by Bangladesh, and no objection appeared to the Tribunal itself. Consequently, the Parties were informed by letters from the Registrar dated 12 May 2010 and 20 September 2010, respectively, that Mr Lowe and Mr Oxman would be admitted to participate in the proceedings as judges ad hoc, after having made the solemn declaration required under article 9 of the Rules.
14. By a letter dated 1 September 2010, Mr Lowe informed the President that he was not in a position to act as a judge ad hoc in the case.

15. By a letter dated 13 September 2010, pursuant to article 19, paragraph 4, of the Rules, the Deputy Agent of Bangladesh informed the Registrar of Bangladesh’s choice of Mr Thomas Mensah as judge ad hoc in the case, to replace Mr Lowe. Since no objection to the choice of Mr Mensah as judge ad hoc was raised by Myanmar, and no objection appeared to the Tribunal itself, the Registrar informed the Parties by a letter dated 26 October 2010 that Mr Mensah would be admitted to participate in the proceedings as judge ad hoc, after having made the solemn declaration required under article 9 of the Rules.

16. On 16 February 2011, the President held consultations with the representatives of the Parties regarding the organization of the hearing, in accordance with article 45 of the Rules.

17. By a letter dated 22 July 2011 addressed to the Registrar, the Consul-General of Japan in Hamburg requested that copies of the written pleadings be made available to Japan. The views of the Parties having been ascertained by the President, the requested copies were made available, pursuant to article 67, paragraph 1, of the Rules, by a letter dated 22 August 2011 from the Registrar to the Consul-General of Japan.

18. By a note verbale dated 15 August 2011, the Embassy of Myanmar in Berlin informed the Registry that the name of the country had been changed from the “Union of Myanmar” to the “Republic of the Union of Myanmar” as of March 2011.

19. The President, having ascertained the views of the Parties, by an Order dated 19 August 2011, fixed 8 September 2011 as the date for the opening of the oral proceedings.

20. At a public sitting held on 5 September 2011, Mr Thomas Mensah, Judge ad hoc chosen by Bangladesh, and Mr Bernard H. Oxman, Judge ad hoc chosen by Myanmar, made the solemn declaration required under article 9 of the Rules.

21. In accordance with article 68 of the Rules, the Tribunal held initial deliberations on 5, 6 and 7 September 2011 to enable judges to exchange views concerning the written pleadings and the conduct of the case. On 7 September 2011, it decided, pursuant to article 76, paragraph 1, of the Rules, to communicate to the Parties two questions which it wished them specially to address. These questions read as follows:

1. Without prejudice to the question whether the Tribunal has jurisdiction to delimit the continental shelf beyond 200 nautical miles, would the Parties expand on their views with respect to the delimitation of the continental shelf beyond 200 nautical miles?

2. Given the history of discussions between them on the issue, would the Parties clarify their position regarding the right of passage of ships of Myanmar through the territorial sea of Bangladesh around St. Martin’s Island?

22. On 7 September 2011, the President held consultations with the representatives of the Parties to ascertain their views regarding the hearing and transmitted to them the questions referred to in paragraph 21.

23. Prior to the opening of the oral proceedings, on 7 September 2011, the Agent of Bangladesh communicated information required under paragraph 14 of the Guidelines concerning the Preparation and Presentation of Cases before the Tribunal.

24. The Agent of Myanmar communicated information required under paragraph 14 of the Guidelines concerning the Preparation and Presentation of Cases before the Tribunal on 9 September 2011 and additional information on 14 September 2011.

25. From 8 to 24 September 2011, the Tribunal held 15 public sittings. At these sittings, the Tribunal was addressed by the following:
26. In the course of the oral proceedings, the Parties displayed a number of slides, including maps, charts and excerpts from documents, and animations on video monitors. Electronic copies of these documents were filed with the Registry by the Parties.

27. The hearing was broadcast over the internet as a webcast.

28. Pursuant to article 67, paragraph 2, of the Rules, copies of the pleadings and the documents annexed thereto were made accessible to the public on the opening of the oral proceedings.

29. In accordance with article 86 of the Rules, verbatim records of each hearing were prepared by the Registrar in the official languages of the Tribunal used during the hearing. Copies of the transcripts of such records were circulated to the judges sitting in the case and to the Parties. The transcripts were made available to the public in electronic form.

30. President Jesus, whose term of office as President expired on 30 September 2011, continued to preside over the Tribunal in the present case until completion, pursuant to article 16, paragraph 2, of the Rules. In accordance with article 17 of the Rules, Judges Yankov and Treves, whose term of office expired on 30 September 2011, having participated in the meeting mentioned in article 68 of the Rules, continued to sit in the case until its completion. Judge Caminos, whose term of office also expired on 30 September 2011, was prevented by illness from participating in the proceedings.

II. Submissions of the Parties

31. In their written pleadings, the Parties presented the following submissions:

In its Memorial and its Reply, Bangladesh requested the Tribunal to adjudge and declare that:

1. The maritime boundary between Bangladesh and Myanmar in the territorial sea shall be that line first agreed between them in 1974 and reaffirmed in 2008. The coordinates for each of the seven points comprising the delimitation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20° 42' 15.8&quot; N</td>
<td>92° 22' 07.2&quot; E</td>
</tr>
<tr>
<td>2.</td>
<td>20° 40' 00.5&quot; N</td>
<td>92° 21' 5.2&quot; E</td>
</tr>
<tr>
<td>3.</td>
<td>20° 38' 53.5&quot; N</td>
<td>92° 22' 39.2&quot; E</td>
</tr>
<tr>
<td>4.</td>
<td>20° 37' 23.5&quot; N</td>
<td>92° 23' 07.2&quot; E</td>
</tr>
<tr>
<td>5.</td>
<td>20° 35' 53.5&quot; N</td>
<td>92° 25' 04.2&quot; E</td>
</tr>
<tr>
<td>6.</td>
<td>20° 33' 40.5&quot; N</td>
<td>92° 25' 49.2&quot; E</td>
</tr>
<tr>
<td>7.</td>
<td>20° 22' 56.6&quot; N</td>
<td>92° 24' 24.2&quot; E</td>
</tr>
</tbody>
</table>

2. From Point 7, the maritime boundary between Bangladesh and Myanmar follows a line with a geodesic azimuth of 215° to the point located at 17° 25' 50.7" N - 90° 15' 49.0" E; and
3. From that point, the maritime boundary between Bangladesh and Myanmar follows the contours of the 200 M limit drawn from Myanmar’s normal baselines to the point located at 15° 42' 54.1” N - 90° 13’ 50.1” E.

(All points referenced are referred to WGS 84.)

In its Counter-Memorial and its Rejoinder, Myanmar requested the Tribunal to adjudge and declare that:

1. The single maritime boundary between Myanmar and Bangladesh runs from Point A to Point G as follows:

<table>
<thead>
<tr>
<th>Point</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20° 42' 15.8” N</td>
<td>92° 22' 07.2” E</td>
</tr>
<tr>
<td>B</td>
<td>20° 41' 03.4” N</td>
<td>92° 20' 12.9” E</td>
</tr>
<tr>
<td>B1</td>
<td>20° 39' 53.6” N</td>
<td>92° 21' 07.1” E</td>
</tr>
<tr>
<td>B2</td>
<td>20° 38’ 09.5” N</td>
<td>92° 22' 40.6” E</td>
</tr>
<tr>
<td>B3</td>
<td>20° 36’ 43.0” N</td>
<td>92° 23’ 58.0” E</td>
</tr>
<tr>
<td>B4</td>
<td>20° 35’ 28.4” N</td>
<td>92° 24’ 54.6” E</td>
</tr>
<tr>
<td>B5</td>
<td>20° 33’ 07.7” N</td>
<td>92° 25’ 44.8” E</td>
</tr>
<tr>
<td>C</td>
<td>20° 30’ 42.8” N</td>
<td>92° 25’ 23.9” E</td>
</tr>
<tr>
<td>D</td>
<td>20° 28’ 20.0” N</td>
<td>92° 19’ 31.6” E</td>
</tr>
<tr>
<td>E</td>
<td>20° 26’ 42.4” N</td>
<td>92° 09’ 53.6” E</td>
</tr>
<tr>
<td>F</td>
<td>20° 13’ 06.3” N</td>
<td>92° 00’ 07.6” E</td>
</tr>
<tr>
<td>G</td>
<td>19° 45’ 36.7” N</td>
<td>91° 32’ 38.1” E</td>
</tr>
</tbody>
</table>

(The co-ordinates are referred to WGS 84 datum)

2. From Point G, the boundary line continues along the equidistance line in a south-west direction following a geodetic azimuth of 231° 37’ 50.9” until it reaches the area where the rights of a third State may be affected.

The Republic of the Union of Myanmar reserves its right to supplement or to amend these submissions in the course of the present proceedings.

32. In accordance with article 75, paragraph 2, of the Rules, the following final submissions were presented by the Parties during the oral proceedings:

On behalf of Bangladesh, at the hearing on 22 September 2011:

[O]n the basis of the facts and arguments set out in our Reply and during these oral proceedings, Bangladesh requests the Tribunal to adjudge and declare that:

1. The maritime boundary between Bangladesh and Myanmar in the territorial sea shall be that line first agreed between them in 1974 and reaffirmed in 2008. The coordinates for each of the seven points comprising the delimitation are those set forth in our written Submissions in the Memorial and Reply;

2. From Point 7, the maritime boundary between Bangladesh and Myanmar follows a line with a geodesic azimuth of 215° to the point located at the coordinates set forth in paragraph 2 of the Submissions as set out in the Reply; and

3. From that point, the maritime boundary between Bangladesh and Myanmar follows the contours of the 200-M limit drawn from Myanmar’s normal baselines to the point located at the coordinates set forth in paragraph 3 of the Submissions as set out in the Reply.

On behalf of Myanmar, at the hearing on 24 September 2011:

Having regard to the facts and law set out in the Counter-Memorial and the Rejoinder, and at the oral hearing, the Republic of the Union of Myanmar requests the Tribunal to adjudge and declare that:

1. The single maritime boundary between Myanmar and Bangladesh runs from point A to point G, as set out in the Rejoinder. […]

2. From point G, the boundary line continues along the equidistance line in a south-west direction following a geodetic azimuth of 231° 37’ 50.9” until it reaches the area where the rights of a third State may be affected.

III. Factual Background

Regional geography (see overview sketch-map on page 20)

33. The maritime area to be delimited in the present case lies in the northeastern part of the Bay of Bengal. This Bay is situated in the northeastern Indian Ocean, covering an area of approximately 2.2 million square kilometres, and is bordered by Sri Lanka, India, Bangladesh and Myanmar.
34. Bangladesh is situated to the north and northeast of the Bay of Bengal. Its land territory borders India and Myanmar and covers an area of approximately 147,000 square kilometres.

35. Myanmar is situated to the east of the Bay of Bengal. Its land territory borders Bangladesh, India, China, Laos and Thailand and covers an area of approximately 678,000 square kilometres.
Brief history of the negotiations between the Parties

36. Prior to the institution of these proceedings, negotiations on the delimitation of the maritime boundary were held between Bangladesh and Myanmar from 1974 to 2010. Eight rounds of talks took place between 1974 and 1986 and six rounds between 2008 and 2010.

37. During the second round of talks, held in Dhaka between 20 and 25 November 1974, the heads of the two delegations, on 23 November 1974, signed the “Agreed Minutes between the Bangladesh Delegation and the Burmese Delegation regarding the Delimitation of the Maritime Boundary between the Two Countries” (hereinafter “the 1974 Agreed Minutes”; see paragraph 57).

38. On the resumption of the talks in 2008, at the first round held in Dhaka from 31 March to 1 April 2008, the heads of delegations on 1 April 2008, signed the “Agreed Minutes of the meeting held between the Bangladesh Delegation and the Myanmar Delegation regarding the delimitation of the Maritime Boundaries between the two countries” (hereinafter “the 2008 Agreed Minutes”; see paragraph 58).

39. In the summary of discussions signed by the heads of the delegations at the fifth round, held in Chittagong on 8 and 9 January 2010, it was noted that Bangladesh had already initiated arbitration proceedings under Annex VII to the Convention.

IV. Subject-matter of the dispute

40. The dispute concerns the delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal with respect to the territorial sea, the exclusive economic zone and the continental shelf.

V. Jurisdiction

41. Bangladesh observes that the Parties have expressly recognized the jurisdiction of the Tribunal over the dispute, as reflected in their declarations made under article 287. It states that “the subject-matter of the dispute is exclusively concerned with the provisions of UNCLOS and thus falls entirely within ITLOS jurisdiction as agreed by the parties”.

42. Bangladesh asserts that its “claim is based on the provisions of UNCLOS as applied to the relevant facts, including but not limited to UNCLOS Articles 15, 74, 76 and 83” and that “[t]hese provisions relate to the delimitation of the territorial sea, exclusive economic zone and continental shelf, including the outer continental shelf beyond 200” nautical miles (hereinafter “nm”).

43. Bangladesh states that the Tribunal’s jurisdiction to delimit the maritime boundary between Bangladesh and Myanmar in respect of all the maritime areas in dispute, including the part of the continental shelf beyond 200 nm from the baselines from which the breadth of the territorial sea is measured (hereinafter “the continental shelf beyond 200 nm”) is recognized under the Convention and concludes that the Tribunal’s jurisdiction in regard to the dispute between Bangladesh and Myanmar is plainly established.

44. Myanmar notes that the two Parties in their declarations under article 287, paragraph 1, of the Convention accepted the jurisdiction of the Tribunal to settle the dispute relating to the delimitation of their maritime boundary in the Bay of Bengal. It states that the dispute before this Tribunal concerns the delimitation of the territorial sea, the exclusive economic zone and the continental shelf of Myanmar and Bangladesh in the Bay of Bengal.

45. Myanmar does not dispute that, “as a matter of principle, the delimitation of the continental shelf, including the shelf beyond 200 [nm], could fall within the jurisdiction of the Tribunal”. However, it submits that “in the present case, the Tribunal does not have jurisdiction with regard to the continental shelf beyond 200 [nm]”. In this regard Myanmar contends that,
even if the Tribunal were to decide that it has jurisdiction to delimit the continental shelf beyond 200 nm, it would not be appropriate for the Tribunal to exercise that jurisdiction in the present case.

* * *


47. The Tribunal observes that Myanmar and Bangladesh, by their declarations under article 287, paragraph 1, of the Convention, quoted in paragraphs 3 and 4, accepted the jurisdiction of the Tribunal for the settlement of the dispute between them relating to the delimitation of their maritime boundary in the Bay of Bengal and that these declarations were in force at the time proceedings before the Tribunal were instituted on 14 December 2009.

48. Pursuant to article 288, paragraph 1, of the Convention and article 21 of the Statute, the jurisdiction of the Tribunal comprises all disputes and all applications submitted to it in accordance with the Convention. In the view of the Tribunal, the present dispute entails the interpretation and application of the relevant provisions of the Convention, in particular articles 15, 74, 76 and 83 thereof.

49. The Tribunal further observes that the Parties agree that the Tribunal has jurisdiction to adjudicate the dispute relating to the delimitation of the territorial sea, the exclusive economic zone and the continental shelf, respectively. As the present case relates, *inter alia*, to the delimitation of the continental shelf, article 76 of the Convention is also of particular importance.

50. Accordingly, the Tribunal concludes that it has jurisdiction to delimit the maritime boundary between the Parties in the territorial sea, the exclusive economic zone and the continental shelf within 200 nm. The Tribunal will deal with the issue of its jurisdiction with respect to the delimitation of the continental shelf beyond 200 nm in paragraphs 341-394.

VI. Applicable law

51. Article 23 of the Statute states: “The Tribunal shall decide all disputes and applications in accordance with article 293” of the Convention.

52. Article 293, paragraph 1, of the Convention states: “A court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention”.

53. The Parties agree that the applicable law is the Convention and other rules of international law not incompatible with it.

54. Articles 15, 74 and 83 of the Convention establish the law applicable to the delimitation of the territorial sea, the exclusive economic zone and the continental shelf, respectively. As the present case relates, *inter alia*, to the delimitation of the continental shelf, article 76 of the Convention is also of particular importance.

55. The provisions of articles 15, 74, 76 and 83 of the Convention will be examined by the Tribunal in the relevant sections of this Judgment relating to the delimitation of the territorial sea, the exclusive economic zone and the continental shelf.
VII. Territorial sea

56. In dealing with the delimitation of the territorial sea, the Tribunal will first address the issue of whether the Parties have in fact delimited their territorial sea, either by signing the Agreed Minutes of 1974 and 2008 or by tacit agreement. The Tribunal will also examine whether the conduct of the Parties may be said to have created a situation of estoppel.

The 1974 and 2008 Agreed Minutes

57. As noted in paragraph 36, the Parties held discussions from 1974 to 2010 on the delimitation of maritime areas between them, including the territorial sea. During the second round of these discussions, the head of the delegation of Burma (now the Republic of the Union of Myanmar), Commodore Chit Hlaing, and the head of the Bangladesh delegation, Ambassador K.M. Kaiser, signed the 1974 Agreed Minutes which read as follows:

Agreed Minutes between the Bangladesh Delegation and the Burmese Delegation regarding the Delimitation of the Maritime Boundary between the Two Countries

1. The delegations of Bangladesh and Burma held discussions on the question of delimiting the maritime boundary between the two countries in Rangoon (4 to 6 September 1974) and in Dacca (20 to 25 November 1974). The discussions took place in an atmosphere of great cordiality, friendship and mutual understanding.

2. With respect to the delimitation of the first sector of the maritime boundary between Bangladesh and Burma, i.e., the territorial waters boundary, the two delegations agreed as follows:

I. The boundary will be formed by a line extending seaward from Boundary Point No. 1 in the Naaf River to the point of intersection of arcs of 12 [nm] from the southernmost tip of St. Martin’s Island and the nearest point on the coast of the Burmese mainland, connecting the intermediate points, which are the mid-points between the nearest points on the coast of St. Martin’s Island and the coast of the Burmese mainland.

The general alignment of the boundary mentioned above is illustrated on Special Chart No. 114 annexed to these minutes.

II. The final coordinates of the turning points for delimiting the boundary of the territorial waters as agreed above will be fixed on the basis of the data collected by a joint survey.

3. The Burmese delegation in the course of the discussions in Dacca stated that their Government’s agreement to delimit the territorial waters boundary in the manner set forth in para 2 above is subject to a guarantee that Burmese ships would have the right of free and unimpeded navigation through Bangladesh waters around St. Martin’s Island to and from the Burmese sector of the Naaf River.

4. The Bangladesh delegation expressed the approval of their Government regarding the territorial waters boundary referred to in para 2. The Bangladesh delegation had taken note of the position of the Burmese Government regarding the guarantee of free and unimpeded navigation by Burmese vessels mentioned in para 3 above.

5. Copies of a draft Treaty on the delimitation of the territorial waters boundary were given to the Burmese delegation by the Bangladesh delegation on 20 November 1974 for eliciting views from the Burmese Government.

6. With respect to the delimitation of the second sector of the Bangladesh-Burma maritime boundary, i.e., the Economic Zone and Continental Shelf boundary, the two delegations discussed and considered various principles and rules applicable in that regard. They agreed to continue discussions in the matter with a view to arriving at a mutually acceptable boundary.

(Signed) (Signed)
(Commodore Chit Hlaing) (Ambassador K.M. Kaiser)
Leader of the Burmese Leader of the Bangladesh
Delegation Delegation
Dated, November 23, Dated, November 23,

58. During the first round of the resumed discussions, the head of the Myanmar delegation, Commodore Maung Oo Lwin, and the head of the Bangladesh delegation, Mr M.A.K. Mahmood, Additional Foreign Secretary, signed the 2008 Agreed Minutes, which read as follows:

Agreed Minutes of the meeting held between the Bangladesh Delegation and the Myanmar Delegation regarding the delimitation of the Maritime Boundaries between the two countries

1. The Delegations of Bangladesh and Myanmar held discussions on the delimitation of the maritime boundary between
the two countries in Dhaka from 31 March to 1st April, 2008. The discussions took place in an atmosphere of cordiality, friendship and understanding.

2. Both sides discussed the ad-hoc understanding on chart 114 of 1974 and both sides agreed ad-referendum that the word "unimpeded" in paragraph 3 of the November 23, 1974 Agreed Minutes, be replaced with "Innocent Passage through the territorial sea shall take place in conformity with the UNCLOS, 1982 and shall be based on reciprocity in each other’s waters”.

3. Instead of chart 114, as referred to in the ad-hoc understanding both sides agreed to plot the following coordinates as agreed in 1974 of the ad-hoc understanding on a more recent and internationally recognized chart, namely, Admiralty Chart No. 817, conducting joint inspection instead of previously agreed joint survey:

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20° -42’-12.3” N</td>
<td>092° -22’-18” E</td>
</tr>
<tr>
<td>2</td>
<td>20° -39’-57” N</td>
<td>092° -21’-16” E</td>
</tr>
<tr>
<td>3</td>
<td>20° -38’-50” N</td>
<td>092° -22’-50” E</td>
</tr>
<tr>
<td>4</td>
<td>20° -37’-20” N</td>
<td>092° -24’-08” E</td>
</tr>
<tr>
<td>5</td>
<td>20° -35’-50” N</td>
<td>092° -25’-15” E</td>
</tr>
<tr>
<td>6</td>
<td>20° -33’-37” N</td>
<td>092° -26’-00” E</td>
</tr>
<tr>
<td>7</td>
<td>20° -22’-53” N</td>
<td>092° -24’-35” E</td>
</tr>
</tbody>
</table>

Other terms of the agreed minutes of the 1974 will remain the same.

4. As a starting point for the delimitation of the EEZ and Continental Shelf, Bangladesh side proposed the intersecting point of the two 12 [nm] arcs (Territorial Sea limits from respective coastlines) drawn from the southernmost point of St. Martin’s Island and Myanmar mainland as agreed in 1974, or any point on the line connecting the St. Martin’s Island and Oyster Island after giving due effect i.e. 3:1 ratio in favour of St. Martin’s Island to Oyster Island. Bangladesh side referred to the Article 121 of the UNCLOS, 1982 and other jurisprudence regarding status of islands and rocks and Oyster Island is not entitled to EEZ and Continental Shelf. Bangladesh side also reiterated about the full effects of St. Martin’s Island as per regime of Islands as stipulated in Article 121 of the UNCLOS, 1982.

5. Myanmar side proposed that the starting point for the EEZ and Continental Shelf could be the mid point on the line connecting the St. Martin’s Island and Oyster Island. Myanmar side referred to Article 7(4), 15, 74, 83 and cited relevant cases and the fact that proportionality of the two coastlines should be considered. Myanmar also stated that Myanmar has given full effect to St. Martin’s Island which was opposite to Myanmar mainland and that Oyster Island should enjoy full effect, since it has inhabitants and has a lighthouse, otherwise, Myanmar side would need to review the full-effect that it had accorded to St. Martin’s Island.

6. The two sides also discussed and considered various equitable principles and rules applicable in maritime delimitation and State practices.

7. They agreed to continue discussions in the matter with a view to arriving at a mutually acceptable maritime boundary in Myanmar at mutually convenient dates.

(Signed)
Commodore Maung Oo Lwin
Leader of the Myanmar Delegation
Dated: April 1, 2008
Dhaka

(Signed)
M.A.K. Mahmood
Additional Foreign Secretary
Leader of the Bangladesh Delegation

59. The Tribunal will now consider the position of the Parties on the Agreed Minutes.

60. In its final submissions Bangladesh requests the Tribunal to adjudge and declare, inter alia, that the maritime boundary between Bangladesh and Myanmar in the territorial sea shall be the line first agreed between them in 1974 and reaffirmed in 2008.

61. According to Bangladesh, the Parties reached agreement in November 1974, at their second round of negotiations. It maintains that the two delegations confirmed the terms of their agreement and gave it clear expression by jointly plotting the agreed line on Special Chart No. 114, which was signed by the heads of both delegations. It also observes that, subsequently, “the Parties’ agreement was reduced to writing” in the form of the 1974 Agreed Minutes.

62. Bangladesh recalls that, during the negotiations in 1974, it presented a draft treaty to Myanmar. Bangladesh states that Myanmar did not sign this document, not because it disagreed with the line, but because it preferred to
incorporate the Parties’ agreement into a comprehensive maritime delimitation treaty including the exclusive economic zone and the continental shelf.

63. According to Bangladesh, “[i]n the years that followed, the territorial sea was treated as a settled issue by both Parties”, and “[n]either Party raised any concerns or suggested a different approach”. It states that “[o]nly in September 2008, 34 years after the adoption of the 1974 agreement, did Myanmar for the first time suggest that the agreement was no longer in force”.

64. In the view of Bangladesh, the 1974 Agreed Minutes were “intended to be and [are] valid, binding, and effective”. Bangladesh states that these Minutes created rights and obligations on both States and therefore constitute an “agreement” within the meaning of article 15 of the Convention. Bangladesh adds that “[i]n deed, the Agreed Minutes of 1974 specifically use that very term in referring to Myanmar’s ‘agreement’ to the delimitation of the territorial sea”. For similar reasons, Bangladesh considers that the 2008 Agreed Minutes also embody an agreement of a binding nature.

65. For its part, Myanmar denies the existence of an agreement between the Parties within the meaning of article 15 of the Convention, arguing that it is clear from both “the form and the language” of the 1974 Agreed Minutes that “the so-called ‘1974 Agreement’ between the delegations subject to a guarantee that Burmese ships would have the right of free and unimpeded navigation through Bangladesh waters around St. Martin’s Island to and from the Burmese sector of the Naaf River”. Paragraph 4 then merely stated that “[t]he Bangladesh delegation had taken note of the position of the Burmese Government regarding the guarantee of free and unimpeded navigation by Burmese vessels mentioned in para 3 above”. [...] The issue was left for future negotiation and settlement. [...] The second and crucial condition in the text is found in paragraphs 4 and 5 of the minutes. According to paragraph 4, “[t]he Bangladesh delegation expressed the approval of their Government regarding the territorial waters boundary referred to in para 2”. The paragraph, however, was silent with respect to approval of the Government of Myanmar to any such boundary. Paragraph 5 then stated that “Copies of a draft Treaty on the delimitation of territorial waters boundary were given to the Burmese delegation by the Bangladesh delegation on 20 November 1974 for eliciting views from the Burmese Government”.

66. According to Myanmar, the 1974 Agreed Minutes were nothing more than a conditional agreement reached at the level of the negotiators. Myanmar emphasizes that its delegation made clear on several occasions that its Government would not sign and ratify a treaty that did not resolve the delimitation dispute in all the different contested areas altogether and that its position was that no agreement would be concluded on the territorial sea before there was agreement regarding the exclusive economic zone/continental shelf. It adds that Bangladesh was fully aware of Myanmar’s position on this point.

67. Myanmar contends that the conditionality of the understanding contained in the 1974 Agreed Minutes is inconsistent with Bangladesh’s assertion that this instrument has binding force. According to Myanmar, the ad hoc understanding was subject to two conditions:

First, paragraph 2 made the understanding between the delegations subject to “a guarantee that Burmese ships would have the right of free and unimpeded navigation through Bangladesh waters around St. Martin’s Island to and from the Burmese sector of the Naaf River”. Paragraph 4 then merely stated that “[t]he Bangladeshi delegation had taken note of the position of the Burmese Government regarding the guarantee of free and unimpeded navigation by Burmese vessels mentioned in para 3 above”. [...] The issue was left for future negotiation and settlement. [...] The second and crucial condition in the text is found in paragraphs 4 and 5 of the minutes. According to paragraph 4, “[t]he Bangladeshi delegation expressed the approval of their Government regarding the territorial waters boundary referred to in para 2”. The paragraph, however, was silent with respect to approval of the Government of Myanmar to any such boundary. Paragraph 5 then stated that “Copies of a draft Treaty on the delimitation of territorial waters boundary were given to the Burmese delegation by the Bangladeshi delegation on 20 November 1974 for eliciting views from the Burmese Government”.

68. In addition, Myanmar observes that the 1974 Agreed Minutes were not approved in conformity with the constitutional provisions in force in either of the two countries.

69. In Myanmar’s view, case law shows that a delimitation agreement is not lightly to be inferred. In support of this, Myanmar refers to the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras) (Judgment, I.C.J. Reports 2007, p. 659, at p. 735, para. 253).
Use of the term "agreement" in article 15 of the Convention

Bangladesh maintains that an "agreement" in accordance with article 15 of the Convention must not necessarily be "in every sense a formally negotiated and binding treaty".

Myanmar emphasizes that "what is contemplated is an agreement that is binding in international law". It argues that the question therefore is whether the 1974 Agreed Minutes constitute an agreement binding under international law, in other words a treaty, and whether by their terms they established a maritime delimitation.

In support of its position that the 1974 Agreed Minutes reflect a binding agreement, Bangladesh claims that their terms are "clear and unambiguous" and "the ordinary meaning is that a boundary has been agreed". According to Bangladesh, "the text clearly identifies a boundary located midway between St. Martin's Island and the coast of Myanmar, from points 1-7 as shown on Special Chart 114". Bangladesh maintains that the terms of the 1974 Agreed Minutes were confirmed by the delegations of the Parties when they jointly plotted the agreed line on that chart. Moreover, it observes that the object and purpose of the agreement and the context in which it was negotiated are also clear, namely, "to negotiate a maritime boundary". It adds that the existence of an agreement is also evidenced by the terminology used, namely "Agreed Minutes".

Myanmar responds that the expression "Agreed Minutes" is often employed in international relations "for the record of a meeting" and "it is not a common designation for a document that the participants intend to constitute a treaty". Myanmar notes that the full title of the 1974 Agreed Minutes is "Agreed Minutes between the Bangladesh Delegation and the Burmese Delegation regarding the Delimitation of the Maritime Boundary between the Two Countries", emphasizing that the 1974 Agreed Minutes were concluded "between the Bangladesh Delegation and the Burmese Delegation". According to Myanmar, a legally binding treaty between two sovereign States would hardly be expressed, in its title, to be between delegations.

Myanmar argues that the "ordinary language" indicates that the 1974 Agreed Minutes "were never intended to constitute a legally binding agreement". In particular, Myanmar observes that the opening words in paragraph 1 of the 1974 Agreed Minutes only relates to "the first sector of the maritime boundary", implying that more sectors must be negotiated before a final agreement would be reached and records that the two delegations agreed "regarding the guarantee of free and unimpeded navigation". Paragraph 2 states that the "Bangladesh delegation has taken note of the position of the Government of Myanmar regarding the coordinates of the ad hoc understanding on a more recent and internationally recognized chart, namely Admiralty Chart No. 817". The second modification to the phrase consisted in plotting the "coordinates as agreed in 1974 of the ad hoc understanding on a more recent and internationally recognized chart, namely Admiralty Chart No. 817". The second modification to the phrase consisted in plotting the "coordinates as agreed in 1974 of the ad hoc understanding on a more recent and internationally recognized chart, namely Admiralty Chart No. 817".

Terms of the "Agreed Minutes" and circumstances of their adoption

In support of its position that the 1974 Agreed Minutes reflect a binding agreement, Bangladesh claims that their terms are "clear and unambiguous" and "the ordinary meaning is that a boundary has been agreed". According to Bangladesh, "the text clearly identifies a boundary located midway between St. Martin's Island and the coast of Myanmar, from points 1-7 as shown on Special Chart 114". Bangladesh maintains that the terms of the 1974 Agreed Minutes were confirmed by the delegations of the Parties when they jointly plotted the agreed line on that chart. Moreover, it observes that the object and purpose of the agreement and the context in which it was negotiated are also clear, namely, "to negotiate a maritime boundary". It adds that the existence of an agreement is also evidenced by the terminology used, namely "Agreed Minutes".

Bangladesh contends that the terms of the 1974 Agreed Minutes were confirmed by the 2008 Agreed Minutes and remained the same, subject only to two minor alterations. The first modification, contained in paragraph 3 of the 1974 Agreed Minutes, added the phrase "unimpeded access" to the phrase "regarding the guarantee of free and unimpeded navigation". The second modification to the phrase consisted in plotting the "coordinates as agreed in 1974 of the ad hoc understanding on a more recent and internationally recognized chart, namely Admiralty Chart No. 817".
indicates that the discussions concerning the maritime boundary in the 
exclusive economic zone and the continental shelf remained ongoing.

77. Referring to the terms of the 2008 Agreed Minutes, Myanmar observes 
that “once again the language is that of a record of discussion, not of treaty 
commitments”. It further observes that the text of the 2008 Agreed Minutes 
also counters Bangladesh’s assertion as they refer to the 1974 Agreed 
Minutes as “an ad-hoc understanding”. Moreover, the wording in paragraph 2 
of the 2008 Agreed Minutes that “both sides agreed ad referendum” indicates 
that “the two delegations intended to refer the matter back to their respective 
governments”.

78. Myanmar argues that the circumstances in which the 1974 Agreed 
Minutes and 2008 Agreed Minutes were concluded “confirm that the Minutes 
were no more than an ad hoc conditional understanding, reached at an initial 
stage of the negotiations, which never ripened into a binding agreement 
between the two negotiating sides”.

79. Myanmar adds that the 1974 Agreed Minutes are by no means 
comparable to the 1949 General Procès-Verbal that was at issue in the case 
concerning Maritime Delimitation in the Black Sea (Romania v. Ukraine) 
(Judgment, I.C.J. Reports 2009, p. 61). Pointing to what it says are essential 
differences between the two instruments, Myanmar contends that the actual 
terms and context of the 1949 General Procès-Verbal are entirely different 
from those of the 1974 Agreed Minutes and points out that the parties to the 
1949 General Procès-Verbal were in agreement that it was a legally binding 
international agreement.

80. Regarding the question of the authority of Myanmar’s delegation, 
Bangladesh considers that the head of the Burmese delegation who signed 
the 1974 Agreed Minutes was the appropriate official to negotiate with 
Bangladesh in 1974 and “did not require full powers to conclude an 
agreement in simplified form”. Bangladesh argues that, even if the head of the 
Burmese delegation lacked the authority to do so, the agreement remains 
valid “if it [was] afterwards confirmed by the State concerned” in accordance 
with article 8 of the Vienna Convention on the Law of Treaties (hereinafter 
“the Vienna Convention”). In this respect Bangladesh holds the view that the 
1974 Agreed Minutes “were confirmed and re-adopted in 2008”.

81. According to Bangladesh:

[what matters is whether the Parties have agreed on a boundary, 
even in simplified form, not whether their agreement is a formally 
negotiated treaty or has been signed by representatives 
empowered to negotiate or ratify the treaty.

82. Bangladesh points out that, in the case concerning Land and Maritime 
Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial 
Guinea intervening) (Judgment, I.C.J. Reports 2002, p. 303, at p. 429, 
para. 263), the International Court of Justice (hereinafter “the ICJ”) “held that 
the Maroua Declaration constituted an international agreement in written form 
tracing a boundary and that it was thus governed by international law and 
constituted a treaty in the sense of the 1969 Vienna Convention on the Law of 
Treaties”.

83. Myanmar argues that members of its delegation to the negotiations in 
November 1974 lacked authority “to commit their Government to a legally-
binding treaty”. It states, in this regard, that the head of the Burmese 
deligation, Commodore Hlaing, a naval officer, could not be considered as 
representing Myanmar for the purpose of expressing its consent to be bound 
by a treaty as he was not one of those holders of high-ranking office in the 
State referred to in article 7, paragraph 2, of the Vienna Convention. 
Furthermore, the circumstances described in article 7, paragraph 1, of the 
Vienna Convention do not apply in the present case since Commodore Hlaing 
did not have full powers issued by the Government of Myanmar and there 
were no circumstances to suggest that it was the intention of Myanmar and 
Bangladesh to dispense with full powers.
84. In the view of Myanmar, under article 8 of the Vienna Convention an act by a person who cannot be considered as representing a State for the purposes of concluding a treaty is without legal effect unless afterwards confirmed by that State. Myanmar adds that what has to be confirmed is the act of the unauthorised person and submits that this act by itself has no legal effect and states that “[i]t does not establish an agreement that is voidable”. It states further that this is “clear from the very fact that article 8 is placed in Part II of the Vienna Convention on the conclusion and entry into force of treaties, and not in Part V” on invalidity, termination and suspension of the operation of treaties.

85. According to Myanmar, the present case is not comparable to the case concerning *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*. Referring to that case, Myanmar states: “the ICJ found that the Maroua Declaration constituted an international agreement because the recognised elements of what constitutes a treaty were met, in particular, the consent of both Nigeria and Cameroon to be bound by the Maroua Declaration. The signatures of the Heads of State of both countries were clearly sufficient to express their consent to be bound. That is not our case”.

Registration

86. Myanmar argues that the fact that the 1974 and the 2008 Agreed Minutes were not registered with the Secretary-General of the United Nations, as required by article 102, paragraph 1, of the United Nations Charter, is another indication that the Parties “did not consider either the 1974 or the 2008 minutes to be a binding agreement”. It adds that neither Party publicized nor submitted charts or lists of co-ordinates of the points plotted in the Agreed Minutes with the Secretary-General of the United Nations, as required by article 16, paragraph 2, of the Convention. Myanmar states that while such submission, or the absence thereof, is not conclusive, it provides a further indication of the intention of Bangladesh and Myanmar with respect to the status of the minutes.

87. Bangladesh, in response, cites the judgment in the case concerning *Maritime Delimitation and Territorial Questions between Qatar and Bahrain*, in which the ICJ stated: “Non-registration or late registration, on the other hand, does not have any consequence for the actual validity of the agreement, which remains no less binding upon the parties” (*Jurisdiction and Admissibility, Judgment, I.C.J. Reports 1994*, p. 112, at p. 122, para. 29).

* * *

88. The Tribunal will now address the question whether the 1974 Agreed Minutes constitute an agreement within the meaning of article 15 of the Convention.

89. The Tribunal notes that, in light of the object and purpose of article 15 of the Convention, the term “agreement” refers to a legally binding agreement. In the view of the Tribunal, what is important is not the form or designation of an instrument but its legal nature and content.

90. The Tribunal recalls that in the “Hoshinmaru” case it recognized the possibility that agreed minutes may constitute an agreement when it stated that “[t]he Protocol or minutes of a joint commission such as the Russian-Japanese Commission on Fisheries may well be the source of rights and obligations between Parties” (“Hoshinmaru” (*Japan v. Russian Federation*), *Prompt Release, Judgment, ITLOS Reports 2007*, p. 18, at p. 46, para. 86). The Tribunal also recalls that in the case concerning *Maritime Delimitation and Territorial Questions between Qatar and Bahrain*, the ICJ observed that “international agreements may take a number of forms and be given a diversity of names” and that agreed minutes may constitute a binding agreement. (*Jurisdiction and Admissibility, Judgment, I.C.J. Reports 1994*, p. 112, at p. 120, para. 23).
91. The Tribunal must decide whether, in the circumstances of the present case, the 1974 Agreed Minutes constitute such an agreement.

92. The Tribunal considers that the terms of the 1974 Agreed Minutes confirm that these Minutes are a record of a conditional understanding reached during the course of negotiations, and not an agreement within the meaning of article 15 of the Convention. This is supported by the language of these Minutes, in particular, in light of the condition expressly contained therein that the delimitation of the territorial sea boundary was to be part of a comprehensive maritime boundary treaty.

93. The Tribunal notes that the circumstances in which the 1974 Agreed Minutes were adopted do not suggest that they were intended to create legal obligations or embodied commitments of a binding nature. From the beginning of the discussions Myanmar made it clear that it did not intend to enter into a separate agreement on the delimitation of territorial sea and that it wanted a comprehensive agreement covering the territorial sea, the exclusive economic zone and the continental shelf.

94. In this context, the Tribunal further points out that in the report prepared by Bangladesh on the second round of negotiations held on 25 November 1974 in Dhaka, it is stated that:

7. Copies of a Draft Treaty on the delimitation of territorial waters boundary were given to the Burmese delegation by the Bangladesh delegation on November 20, 1974 for eliciting views from the Burmese Government. The initial reaction of the Burmese side was that they were not inclined to conclude a separate treaty/agreement on the delimitation of territorial waters; they would like to conclude a single comprehensive treaty where the boundaries of territorial waters and continental shelf were incorporated.

95. In the view of the Tribunal, the delimitation of maritime areas is a sensitive issue. The Tribunal concurs with the statement of the ICJ that "[t]he establishment of a permanent maritime boundary is a matter of grave importance and agreement is not easily to be presumed" (Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras), Judgment, I.C.J. Reports 2007, p. 659, at p. 735, para. 253).

96. On the question of the authority to conclude a legally binding agreement, the Tribunal observes that, when the 1974 Agreed Minutes were signed, the head of the Burmese delegation was not an official who, in accordance with article 7, paragraph 2, of the Vienna Convention, could engage his country without having to produce full powers. Moreover, no evidence was provided to the Tribunal that the Burmese representatives were considered as having the necessary authority to engage their country pursuant to article 7, paragraph 1, of the Vienna Convention. The Tribunal notes that this situation differs from that of the Maroua Declaration which was signed by the two Heads of State concerned.

97. The fact that the Parties did not submit the 1974 Agreed Minutes to the procedure required by their respective constitutions for binding international agreements is an additional indication that the Agreed Minutes were not intended to be legally binding.

98. For these reasons, the Tribunal concludes that there are no grounds to consider that the Parties entered into a legally binding agreement by signing the 1974 Agreed Minutes. The Tribunal reaches the same conclusion regarding the 2008 Agreed Minutes since these Minutes do not constitute an independent commitment but simply reaffirm what was recorded in the 1974 Agreed Minutes.

99. In light of the foregoing, the Tribunal does not find it necessary to address the relevance, if any, of the lack of registration of the 1974 Agreed Minutes as required by article 102, paragraph 1, of the United Nations Charter or of the failure to deposit charts or lists of geographical coordinates with the Secretary-General of the United Nations as provided in article 16, paragraph 2, of the Convention.
Tacit or *de facto* agreement

100. The Tribunal will now consider whether the conduct of the Parties evidences a tacit or *de facto* agreement relating to the boundary in the territorial sea.

101. Bangladesh contends that the fact that the Parties have conducted themselves in accordance with the agreed delimitation for over three decades demonstrates the existence of a tacit or *de facto* agreement as to the boundary line in the territorial sea. In support of its position, Bangladesh argues that each Party “exercised peaceful and unchallenged administration and control over its agreed territorial sea” and that, in reliance on the existing agreement, Bangladesh permitted Myanmar’s vessels to “navigate freely” through its waters in the vicinity of St. Martin’s Island to reach the Naaf River.

102. In order to illustrate both Parties’ commitment to the 1974 line, Bangladesh states that its coastal fishermen have relied on that line in conducting their fishing activities in the areas between St. Martin’s Island and the Myanmar coast. It has submitted affidavits from fishermen attesting to the fact that they believe there is an agreed boundary between the Parties in the territorial sea, and that this is located approximately midway between St. Martin’s and Myanmar’s mainland coast. It states that, as a result, they have confined their fishing activities to the Bangladesh side of the boundary and carried the national flag of Bangladesh onboard, adding that some of them have also testified to the fact that they have had their vessels intercepted by the Myanmar Navy when their boats accidentally strayed across the agreed line.

103. Moreover, Bangladesh points out that it has submitted affidavits recounting the activities of its naval vessels and aerial patrols and other activities carried out by its Navy and Coast Guard to the west of the agreed line.

104. In the same vein, Bangladesh refers to the Parties’ actions in reploting the 1974 line onto a more up-to-date chart, namely, British Admiralty Chart No. 817(INT 7430) (hereinafter “Admiralty Chart 817”).

105. Regarding the statement made by Myanmar’s Minister of Foreign Affairs and head of its delegation during the negotiations between the Parties in November 1985, Bangladesh observes that in the Minister’s statement, “far from repudiating a supposedly unauthorized deal negotiated in 1974, he referred to the Minutes signed in Dhaka with approval”.

106. With reference to the note verbale of Myanmar dated 16 January 2008, by which Myanmar notified Bangladesh of its intention to carry out survey work on both sides of the boundary, Bangladesh states: “Why would Myanmar seek Bangladesh’s consent if it regarded the whole area as falling within Myanmar’s territorial sea? Its conduct in 2008 amounts to an acknowledgment of Bangladesh’s sovereignty over the territorial sea up to the median line, and its own note verbale even made express reference to the 1974 Agreed Minutes in that context”.

107. Myanmar contends that the conduct of the Parties, including the signing of the 1974 Agreed Minutes by the heads of their delegations, has not established a tacit or *de facto* agreement between them with respect to the delimitation of the territorial sea. Myanmar further contends that it never acquiesced in any delimitation in the territorial sea. In its view, “Bangladesh puts forward no evidence to demonstrate its assertion that the parties have administered their waters in accordance with the agreed minutes, or that Myanmar’s vessels have enjoyed the right of free and unimpeded navigation in the waters around St. Martin’s Island, in accordance with the agreed minutes”. If any such practice existed, Myanmar argues, “it existed regardless of the understandings reached in 1974”.

108. In this connection, Myanmar notes that, during the negotiations between the Parties, Commodore Hlaing, who was the head of the Burmese delegation, reminded his counterpart that the passage of Myanmar vessels in
the waters surrounding St. Martin’s Island “was a routine followed for many years by Burmese naval vessels to use the channel […]. He added that in asking for unimpeded navigation the Burmese side was only asking for existing rights which it had been exercising since 1948”.

109. Myanmar states that the affidavits of naval officers and fishermen produced by Bangladesh cannot be considered as containing relevant evidence in the present case. It further states that the naval officers, officials of Bangladesh, have a clear interest in supporting the position of Bangladesh on the location of the maritime boundary. In this regard, Myanmar relies on case law, namely the decisions in the case concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America) (Merits, Judgment, I.C.J. Reports 1986, p. 14, at p. 42, para. 68) and the case concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda) (Judgment, I.C.J. Reports 2005, p. 168, at pp. 218-219, para. 129), and makes reference, in particular, to the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras) (Judgment, I.C.J. Reports 2007, p. 659, at p. 731, para. 243).

110. Myanmar further points out that its Minister of Foreign Affairs, in his statement made in Rangoon on 19 November 1985, reiterated Myanmar’s position that what was clearly implied in the text of the Agreed Minutes was that the delimitation of the territorial sea on the one hand and the exclusive economic zone and the continental shelf on the other hand, should be settled together in a single instrument.

111. With regard to its note verbale of 16 January 2008, referred to by Bangladesh, Myanmar contends that Bangladesh ignores the terms of that note. It points out that the note verbale stated that, as States Parties to the Convention, Bangladesh and Myanmar are both entitled to a 12 nm territorial sea “in principle” and also that St. Martin’s Island enjoys such territorial sea “in principle in accordance with UNCLOS, 1982”. Myanmar argues that the note verbale was “explicitly a request for cooperation, not for consent” and that it refrained from relying upon the agreed boundary. Myanmar therefore is of the view that, contrary to Bangladesh’s assertion, the note verbale is entirely consistent with Myanmar’s position on these matters.

* * *

112. The Tribunal will first address the issue of affidavits submitted by Bangladesh. In this context, the Tribunal recalls the decision in the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras), where it is stated that:

> witness statements produced in the form of affidavits should be treated with caution. In assessing such affidavits the Court must take into account a number of factors. These would include whether they were made by State officials or by private persons not interested in the outcome of the proceedings and whether a particular affidavit attests to the existence of facts or represents only an opinion as regards certain events (Judgment, I.C.J. Reports 2007, p. 659, at p. 731, para. 244).

113. The Tribunal considers that the affidavits from fishermen submitted by Bangladesh do not constitute evidence as to the existence of an agreed boundary in the territorial sea. The affidavits merely represent the opinions of private individuals regarding certain events.

114. With regard to the affidavits from the naval officers, the Tribunal observes that they are from officials who may have an interest in the outcome of the proceedings.

115. The Tribunal concludes that the affidavits submitted by Bangladesh do not provide convincing evidence to support the claim that there is an agreement between the Parties on the delimitation of their territorial seas.

116. In the context of its examination of the conduct of the Parties, the Tribunal has reviewed the statement of the Minister of Foreign Affairs of Myanmar of 19 November 1985 during the sixth round of negotiations between the Parties and the note verbale of 16 January of 2008 addressed by
the Ministry of Foreign Affairs of Myanmar to the Ministry of Foreign Affairs of Bangladesh. The Tribunal is of the view that the statement and the note verbale do not indicate a tacit or *de facto* agreement by Myanmar on the line described in the 1974 Agreed Minutes. In the first case the Minister of Foreign Affairs of Myanmar stated that a condition set forth by his country in accepting the line proposed by Bangladesh was that all issues relating to the delimitation should be settled together in a single instrument. In the second case Myanmar stressed in the note verbale that the two countries “have yet to delimit a maritime boundary” and “it is in this neighborly spirit” that Myanmar has requested the cooperation of Bangladesh.

117. In this regard, the Tribunal shares the view of the ICJ that “[e]vidence of a tacit legal agreement must be compelling” (*Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p. 659, at p. 735, para. 253).

118. The Tribunal concludes that the evidence presented by Bangladesh falls short of proving the existence of a tacit or *de facto* boundary agreement concerning the territorial sea.

**Estoppel**

119. The Tribunal will now turn to the question as to whether the doctrine of estoppel is applicable in the present case.

120. Bangladesh asserts that fundamental considerations of justice require that Myanmar is estopped from claiming that the 1974 agreement is anything other than valid and binding. In this regard, it recalls the *Case concerning the Temple of Preah Vihear (Cambodia v. Thailand)*, in which it is stated that:

> Thailand is now precluded by her conduct from asserting that she did not accept the [French map]. She has, for fifty years, enjoyed such benefits as the Treaty of 1904 conferred on her, if only the benefit of a stable frontier. France, and through her Cambodia, relied on Thailand’s acceptance of the map. ... It is not now open to Thailand, while continuing to claim and enjoy the benefits of the

settlement, to deny that she was ever a consenting party to it (*Merits, Judgment, I.C.J. Reports 1962*, p. 6, at p. 32).

121. Bangladesh argues that “[t]he ICJ’s reasoning and conclusion apply equally in the present case. For over thirty years, Myanmar enjoyed the benefits of the 1974 Agreement, including not only the benefit of a stable maritime boundary but also the right of free passage through Bangladesh’s territorial waters”.

122. Myanmar asserts that Bangladesh has not established that it relied on any conduct of Myanmar to its detriment. According to Myanmar, “[f]irst, Bangladesh has not supported its contention – that it allowed for the unimpeded passage of Myanmar’s vessels – with any evidence. Second, it produced no evidence to show that it adhered to the 1974 minutes with respect to fisheries. Third, it had not shown how any of these alleged facts were to its detriment. It is unclear how any conduct or statements on behalf of Myanmar were relied upon by Bangladesh to its detriment”.

123. Myanmar therefore concludes that its actions “fall far short from the clear, consistent and definite conduct required to establish the existence of an estoppel”.

* * *

124. The Tribunal observes that, in international law, a situation of estoppel exists when a State, by its conduct, has created the appearance of a particular situation and another State, relying on such conduct in good faith, has acted or abstained from an action to its detriment. The effect of the notion of estoppel is that a State is precluded, by its conduct, from asserting that it did not agree to, or recognize, a certain situation. The Tribunal notes in this respect the observations in the *North Sea Continental Shelf cases (Judgment, I.C.J. Reports 1969*, p. 3, at p. 26, para. 30) and in the case concerning *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Judgment, I.C.J. Reports 1984*, p. 246, at p. 309, para. 145).
125. In the view of the Tribunal, the evidence submitted by Bangladesh to demonstrate that the Parties have administered their waters in accordance with the limits set forth in the 1974 Agreed Minutes is not conclusive. There is no indication that Myanmar’s conduct caused Bangladesh to change its position to its detriment or suffer some prejudice in reliance on such conduct. For these reasons, the Tribunal finds that Bangladesh’s claim of estoppel cannot be upheld.

126. Having found that the 1974 and 2008 Agreed Minutes do not constitute an agreement within the meaning of article 15 of the Convention, that Bangladesh failed to prove the existence of a tacit or de facto maritime boundary agreement and that the requirements of estoppel were not met, the Tribunal will now delimit the territorial sea between Bangladesh and Myanmar.

127. Article 15 of the Convention, which is the applicable law, reads as follows:

Where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial seas of each of the two States is measured. The above provision does not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance therewith.

128. The Tribunal observes that Myanmar and Bangladesh agree that the law applicable to the delimitation of the territorial sea in the present case is provided by article 15 of the Convention.

129. It follows from article 15 of the Convention that before the equidistance principle is applied, consideration should be given to the possible existence of historic title or other special circumstances relevant to the area to be delimited.

**Historic title and other special circumstances**

130. The Tribunal finds no evidence of an historic title in the area to be delimited and notes that neither Party has invoked the existence of such title.

131. Myanmar has raised the issue of St. Martin’s Island as a special circumstance in the context of the delimitation of the territorial sea between the Parties and argues that St. Martin’s Island is an important special circumstance which necessitates a departure from the median line. It points out that St. Martin’s Island lies immediately off the coast of Myanmar, to the south of the point in the Naaf River which marks the endpoint of the land boundary between Myanmar and Bangladesh and is the starting-point of their maritime boundary.

132. Myanmar contends that St. Martin’s Island is a feature standing alone in the geography of Bangladesh and is situated opposite the mainland of Myanmar, not Bangladesh. In Myanmar’s view, granting St. Martin’s Island full effect throughout the territorial sea delimitation would lead to a considerable distortion with respect to the general configuration of the coastline, created by a relatively small feature.

133. Myanmar argues that, in general, islands generate more exaggerated distortions when the dominant coastal relationship is one of adjacency, whereas distortions are much less extreme where coasts are opposite to each other. It maintains that account has to be taken of this difference in the present case as the coastal relationship between Myanmar’s mainland and St. Martin’s Island transitions from one of pure oppositeness to one of pure adjacency.

134. In this context, Myanmar states that, because of the spatial relationship among Bangladesh’s mainland coast, Myanmar’s mainland coast and
St. Martin’s Island, the island lies on Myanmar’s side of any delimitation line constructed between mainland coasts. In Myanmar’s view, St. Martin’s Island is therefore “on the wrong side” of such delimitation line.

135. Myanmar argues that St. Martin’s Island cannot be defined as a “coastal island” if only because it lies in front of Myanmar’s coast, not that of Bangladesh, to which it belongs. While recognizing that it is an island within the meaning of article 121, paragraphs 1 and 2, of the Convention, and that, consequently, it can generate maritime areas, Myanmar states that the delimitation of such areas must however be done “in accordance with the provisions of [the] Convention applicable to other land territory”. It contends in this respect that St. Martin’s Island must be considered as constituting in itself a special circumstance which calls for shifting or adjusting the median line which otherwise would have been drawn between the coasts of the Parties.

136. Myanmar states that this approach is in accordance with case law, relating both to delimitation of the territorial sea and other maritime zones. In this regard, it refers to a number of cases including Delimitation of the Continental Shelf between the United Kingdom of Great Britain and Northern Ireland, and the French Republic (Decision of 30 June 1977, RIAA, Vol. XVIII, p. 3), Continental Shelf (Tunisia/Libyan Arab Jamahiriya) (Judgment, I.C.J. Reports 1982, p. 18), Delimitation of the Maritime Boundary in the Gulf of Maine Area (Judgment, I.C.J. Reports 1984, p. 246) and Dubai/Sharjah Border Arbitration (Dubai/Sharjah, Award of 19 October 1981, ILR, Vol. 91, p. 543).

137. Myanmar, also relying on State practice, observes that “small or middle-size islands are usually totally ignored” and that the “predominant tendency” is to give no or little effect to such maritime formations.

138. In response to Myanmar’s claim that St. Martin’s Island represents a “special circumstance”, Bangladesh argues that this claim is incorrect because of the coastal geography in the relevant area of the territorial sea. Bangladesh contends that Myanmar has “attempted to manufacture a ‘special circumstance’ where none exists”. It maintains that, “[i]n order to do this, Myanmar has resorted to the entirely artificial construction of a mainland-to-mainland equidistance line […] which assumes that St. Martin’s Island does not exist at all”. Bangladesh maintains that Myanmar has ignored reality in order to provide itself with the desired result; namely, an equidistance line that it can claim runs to the north of St. Martin’s Island. It adds that, “[f]rom this pseudo-geographic artifice, Myanmar draws the conclusion that St. Martin’s Island is located in Myanmar’s maritime area”.

139. Responding to Myanmar’s contention that St. Martin’s Island is on the “wrong” side of the equidistance line between the coasts of Myanmar and Bangladesh and that this is an important special circumstance which necessitates a departure from the median line, Bangladesh states that this contention marks a sharp departure from Myanmar’s long-standing acceptance that St. Martin’s Island is entitled to a 12 nm territorial sea.

140. Bangladesh takes issue with the conclusions drawn by Myanmar from the case law and the State practice on which it relies to give less than full effect to St. Martin’s Island. In this regard Bangladesh states that a number of cases identified by Myanmar to support giving less than full effect to St. Martin’s Island are not pertinent for the following reasons: first, they do not deal with the delimitation of the territorial seas, but concern the delimitation of the exclusive economic zone and the continental shelf; second, most of the delimitation treaties Myanmar cites established maritime boundaries in areas that are geographically distinguishable from the present case; and third, many treaties Myanmar invokes reflect political solutions reached in the context of resolving sovereignty and other issues.

141. Bangladesh, in support of its argument that St. Martin’s Island should be accorded full effect, refers to the treatment of certain islands in the case concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain, the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras) and the Black Sea case.
142. Bangladesh argues that State practice relevant to maritime delimitation clearly indicates that an island adjacent to the coast may have an important bearing on the delimitation of a maritime boundary. It states that islands, once determined as such under article 121, paragraph 1, of the Convention, are entitled to a 12 nm territorial sea and, in principle, their own exclusive economic zone and continental shelf. Bangladesh further points out that the right of States to claim a territorial sea around islands is also a well-established principle of customary international law and is recognized by Myanmar. In Bangladesh’s view, the burden is on Myanmar to persuade the Tribunal why St. Martin’s Island should be treated as a special circumstance and it has failed to meet that burden.

143. Bangladesh states that St. Martin’s Island “is located 6.5 [nm] southwest of the land boundary terminus and an equivalent distance from the Bangladesh coast”. It further points out that the island has “a surface area of some 8 square kilometres and sustains a permanent population of about 7,000 people” and that it serves as “an important base of operations for the Bangladesh Navy and Coast Guard”. Bangladesh maintains that fishing “is a significant economic activity on the island”, which also “receives more than 360,000 tourists every year”. Bangladesh notes that “[t]he island is extensively cultivated and produces enough food to meet a significant proportion of the needs of its residents”.

144. Bangladesh challenges Myanmar’s assertion that St. Martin’s Island is situated “in front of the Myanmar mainland coast” and “south of any delimitation line properly drawn from the coasts of the Parties”. Bangladesh argues that this assertion is wrong and that it is premised on “Myanmar’s curious conception of frontage and its peculiar use of the words ‘properly drawn’”. Bangladesh submits that two points are immediately apparent from Admiralty Chart 817: first, St. Martin’s Island is just as close to Bangladesh as it is to Myanmar – 4.547 nm from Bangladesh and 4.492 nm from Myanmar; and second, St. Martin’s Island lies well within the 12 nm limit drawn from Bangladesh’s coast.

145. Bangladesh concludes that “[t]he proximity of St. Martin’s Island to Bangladesh, its large permanent population and its important economic role are consistent with the conclusion that it is an integral part of the coastline of Bangladesh”, and affirms that St. Martin’s Island “is entitled to a full 12 nm territorial sea”.

146. The Tribunal will now consider whether St. Martin’s Island constitutes a special circumstance for the purposes of the delimitation of the territorial sea between Bangladesh and Myanmar.

147. The Tribunal notes that neither case law nor State practice indicates that there is a general rule concerning the effect to be given to islands in maritime delimitation. It depends on the particular circumstances of each case.

148. The Tribunal also observes that the effect to be given to islands in delimitation may differ, depending on whether the delimitation concerns the territorial sea or other maritime areas beyond it. Both the nature of the rights of the coastal State and their seaward extent may be relevant in this regard.

149. The Tribunal notes that, while St. Martin’s Island lies in front of Myanmar’s mainland coast, it is located almost as close to Bangladesh’s mainland coast as to the coast of Myanmar and it is situated within the 12 nm territorial sea limit from Bangladesh’s mainland coast.

150. The Tribunal observes that most of the cases and the State practice referred to by Myanmar concern the delimitation of the exclusive economic zone or the continental shelf, not of the territorial sea, and that they are thus not directly relevant to the delimitation of the territorial sea.
151. While it is not unprecedented in case law for islands to be given less than full effect in the delimitation of the territorial sea, the islands subject to such treatment are usually “insignificant maritime features”, such as the island of Qit’at Jaradah, a very small island, uninhabited and without any vegetation, in the case concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Merits, Judgment, I.C.J. Reports 2001, p. 40, at p. 104, para. 219). In the view of the Tribunal, St. Martin’s Island is a significant maritime feature by virtue of its size and population and the extent of economic and other activities.

152. The Tribunal concludes that, in the circumstances of this case, there are no compelling reasons that justify treating St. Martin’s Island as a special circumstance for the purposes of article 15 of the Convention or that prevent the Tribunal from giving the island full effect in drawing the delimitation line of the territorial sea between the Parties.

153. The Tribunal observes that, pursuant to article 15 of the Convention, the territorial sea of the Parties is to be delimited by an equidistance line.

154. The first step to be considered in the construction of the delimitation line is the selection of base points from which the delimitation line will be drawn.

155. The Tribunal notes that, in drawing their delimitation lines, the Parties used base points on the low-water line of their coasts and that the geographical co-ordinates they used for this purpose are given by reference to WGS 84 as geodetic datum.

156. The Tribunal sees no reason to depart from the common approach of the Parties on the issue of base points. Accordingly, it will draw an equidistance line from the low-water line indicated on the Admiralty Chart 817 used by the Parties.

157. The Tribunal notes that the Parties are in agreement as to the starting point of the delimitation line. This point, which corresponds to the land boundary terminus as agreed between Burma and Pakistan in 1966, is marked on the sketch-maps produced by the Parties as point A and its co-ordinates are 20° 42' 15.8'' N, 92°22' 07.2'' E.

158. The Parties disagree on the location of the first turning point of the equidistance line where St. Martin’s Island begins to have effect. This point is plotted as point B in Myanmar’s sketch-map with the co-ordinates 20° 41' 03.4'' N, 92° 20' 12.9'' E and as point 2A on Bangladesh’s equidistance line, as depicted in paragraph 2.102 of its Reply, with the co-ordinates 20° 40' 45.0'' N, 92°20' 29.0'' E.

159. According to Bangladesh, Myanmar incorrectly plotted its point B and “[i]t has done so because it has ignored the closest points on the Bangladesh coast at the mouth of the Naaf River [...]. Instead, it has taken a more distant base point on the Bangladesh coast – point ß1 [...]. If Myanmar had used the correct base points, [...] its point B would have been located in a more southerly place, [...] at point 2A”.

160. During the hearing, Myanmar did not object to the argument presented by Bangladesh with respect to the correct location of point B. Myanmar acknowledged that, “[f]rom a technical perspective, there [was] nothing objectionable about Bangladesh’s proposed territorial sea line”, adding that “[i]t is a straightforward exercise, once the relevant coastal features have been determined, to calculate an equidistance line from the nearest points on the baselines of the two States”.

161. Having examined the coasts of both Parties as shown on Admiralty Chart 817, the Tribunal accepts point 2A as plotted by Bangladesh.
162. The Tribunal observes that, beyond point 2A, the following segments of the line, defined by the turning points indicated by Myanmar and Bangladesh as listed below, are similar.

Myanmar’s turning points are:
- B1: 20° 39’ 53.6” N, 92° 21’ 07.1” E;
- B2: 20° 38’ 09.5” N, 92° 22’ 40.6” E;
- B3: 20° 36’ 43.0” N, 92° 23’ 58.0” E;
- B4: 20° 35’ 28.4” N, 92° 24’ 54.5” E;
- B5: 20° 33’ 07.7” N, 92° 25’ 44.8” E;
- C: 20° 30’ 42.8” N, 92° 25’ 23.9” E.

Bangladesh’s turning points are:
- 3A: 20° 39’ 51.0” N, 92° 21’ 11.5” E;
- 4A: 20° 37’ 13.5” N, 92° 23’ 42.3” E;
- 5A: 20° 35’ 26.7” N, 92° 24’ 58.5” E;
- 6A: 20° 33’ 17.8” N, 92° 25’ 46.0” E.

163. The Tribunal observes that, beyond point C, the further segments of the delimitation lines proposed by the Parties differ substantially as a result of their positions on the effect to be given to St. Martin’s Island.

164. Having concluded that full effect should be given to St. Martin’s Island, the Tribunal decides that the delimitation line should follow an equidistance line up to the point beyond which the territorial seas of the Parties no longer overlap.
165. Having examined the Parties’ coasts that are relevant to the construction of the equidistance line for the delimitation of the territorial sea, the Tribunal is of the view that the coordinates identified by Bangladesh in its proposed equidistance line until point 8A, as depicted in paragraph 2.102 of its Reply, adequately define an equidistance line measured from the low-water line of the respective coasts of the Parties, including St. Martin’s Island, as reproduced on Admiralty Chart 817.

166. For the above mentioned reasons, the Tribunal decides that the equidistance line delimiting the territorial sea between the two Parties is defined by points 1, 2, 3, 4, 5, 6, 7 and 8 with the following coordinates and connected by geodetic lines:

1: 20° 42' 15.8" N, 92°22' 07.2" E;
2: 20° 40' 45.0" N, 92°20' 29.0" E;
3: 20° 39' 51.0" N, 92° 21' 11.5" E;
4: 20° 37' 13.5" N, 92° 23' 42.3" E;
5: 20° 35' 26.7" N, 92° 24' 58.5" E;
6: 20° 33' 17.8" N, 92° 25' 46.0" E;
7: 20° 26' 11.3" N, 92° 24' 52.4" E;
8: 20° 22' 46.1" N, 92° 24' 09.1" E.

167. The delimitation line is shown on the attached sketch-map number 2.

168. The Tribunal observes that, in giving St. Martin’s Island full effect in the delimitation of the territorial sea, the delimitation line will reach a point where the island’s territorial sea no longer overlaps with the territorial sea of Myanmar. At this point, the territorial sea around St. Martin’s Island begins to meet the exclusive economic zone and the continental shelf of Myanmar. This will occur in the area defined by the 12 nm envelope of arcs of the territorial sea of St. Martin’s Island beyond point 8.

169. As a consequence, the Tribunal is no longer faced with the task of having to delimit the territorial sea beyond point 8. The Tribunal recognizes that Bangladesh has the right to a 12 nm territorial sea around St. Martin’s Island in the area where such territorial sea no longer overlaps with Myanmar’s territorial sea. A conclusion to the contrary would result in giving more weight to the sovereign rights and jurisdiction of Myanmar in its exclusive economic zone and continental shelf than to the sovereignty of Bangladesh over its territorial sea.
170. The question of free and unimpeded navigation by Myanmar in the territorial sea of Bangladesh around St. Martin’s Island to and from the Naaf River is not an issue to be considered in respect of delimitation. It is, however, a related matter of particular concern to Myanmar.

171. In this context, the Tribunal requested the Parties to address the following question: “Given the history of discussions between them on the issue, would the Parties clarify their position regarding the right of passage of ships of Myanmar through the territorial sea of Bangladesh around St. Martin’s Island?”

172. Myanmar explained that it considered a guarantee of this right as “crucially important” but that, in Myanmar’s view, Bangladesh had “never given the guarantee that Myanmar sought”. Myanmar points out that there had been no problems with access to Bangladesh’s territorial sea but mainly because, “in the absence of any guarantee”, Myanmar had never sought to put to test its right. Overall, Myanmar states that the “position on the right of passage of ships of Myanmar through the territorial sea of Bangladesh around St Martin’s Island continues to be less than satisfactory”.

173. On this issue, Bangladesh stated in its Memorial that “[a]s part of, and in consideration for, their November 1974 agreement, Bangladesh also agreed to accord Myanmar’s vessels the right of free and unimpeded navigation through Bangladesh’s waters around St. Martin’s Island to and from the Naaf River”.

174. In response to the request from the Tribunal, the Foreign Minister of Bangladesh, its Agent in the present case, during the hearing stated the following:
Since at least 1974 Bangladesh and Myanmar have engaged in extensive negotiations concerning their maritime boundary in the Bay of Bengal. Over the course of 34 years, our countries have conducted some 13 rounds of talks. We achieved some notable early successes. In particular, in 1974, at just our second round of meetings, we reached the agreement concerning the maritime boundary in the territorial sea, about which you will hear more tomorrow. That agreement was fully applied and respected by both States over more than three decades. As a result of that agreement, there have never been any problems concerning the right of passage of ships of Myanmar through our territorial sea around St Martin's Island. In its two rounds of pleadings Myanmar had every opportunity to introduce evidence of any difficulties, if indeed there were any. It has not done so. That is because there are no difficulties. I am happy to restate that Bangladesh will continue to respect such access in full respect of its legal obligations.

175. Counsel for Bangladesh thereafter stated: “What the Foreign Minister and Agent says in response to a direct question from an international tribunal commits the State”.

176. The Tribunal takes note of this commitment by Bangladesh.

VIII. Exclusive economic zone and continental shelf within 200 nautical miles

177. The Tribunal will now turn to the delimitation of the exclusive economic zone and the continental shelf within 200 nm.

Single delimitation line

178. Before proceeding with the delimitation of the exclusive economic zone and the continental shelf, the Tribunal must clarify the nature of the delimitation line.

179. Bangladesh states that the Tribunal should identify a single line to delimit the seabed and subsoil and the superjacent waters. Bangladesh notes that its position is “in accordance with the international judicial practice”. According to Bangladesh, although the Convention contains separate provisions for the delimitation of the exclusive economic zone and the continental shelf, “international practice has largely converged around the drawing of a ‘single maritime boundary’ to delimit both zones”.

180. Myanmar, in turn, states that the Parties agree in asking the Tribunal to draw a single maritime boundary for the superjacent waters, the seabed and subsoil, that is, for the exclusive economic zone and the continental shelf.

181. The Tribunal accordingly will draw a single delimitation line for both the exclusive economic zone and the continental shelf.

Applicable law

182. The Tribunal points out that the provisions of the Convention applicable to the delimitation of the exclusive economic zone and the continental shelf are in articles 74 and 83. The Tribunal observes that these two articles are identical in their content, differing only in respect of the designation of the maritime area to which they apply. These articles state as follows:

1. The delimitation of the [exclusive economic zone/continental shelf] between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

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.

3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

4. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the [exclusive economic zone/continental shelf] shall be determined in accordance with the provisions of that agreement.
183. Although article 74, paragraph 1, and article 83, paragraph 1, of the Convention explicitly address delimitation agreements, they also apply to judicial and arbitral delimitation decisions. These paragraphs state that delimitation must be effected “on the basis of international law, as referred to in article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution”. Customary international law is one of the sources identified in article 38. Accordingly, the law applicable under the Convention with regard to delimitation of the exclusive economic zone and the continental shelf includes rules of customary international law. It follows that the application of such rules in the context of articles 74 and 83 of the Convention requires the achievement of an equitable solution, as this is the goal of delimitation prescribed by these articles.

184. Decisions of international courts and tribunals, referred to in article 38 of the Statute of the ICJ, are also of particular importance in determining the content of the law applicable to maritime delimitation under articles 74 and 83 of the Convention. In this regard, the Tribunal concurs with the statement in the Arbitral Award of 11 April 2006 that: “In a matter that has so significantly evolved over the last 60 years, customary law also has a particular role that, together with judicial and arbitral decisions, helps to shape the considerations that apply to any process of delimitation” (Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them, Decision of 11 April 2006, RIAA, Vol. XXVII, p. 147, at pp. 210-211, para. 223).

Relevant coasts

185. The Tribunal will now turn to the delimitation process. In examining this issue, the Tribunal notes “the principle that the land dominates the sea through the projection of the coasts or the coastal fronts” (Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009, p. 61, at p. 89, para. 77). As stated by the ICJ in the North Sea cases, “the land is the legal source of the power which a State may exercise over territorial extensions to seaward” (North Sea Continental Shelf, Judgment, I.C.J. Reports 1969, p. 3, at p. 51, paragraph 96).

186. Bangladesh is of the view that its entire coast is relevant “from the land boundary terminus with Myanmar in the Naaf River to the land boundary terminus with India in the Raimangal Estuary”.

187. Bangladesh measures this coast by means of two straight lines in order to avoid the significant difficulties caused by the sinuosities of the coast. According to Bangladesh, the combined length of these lines is 421 kilometres.

188. Myanmar describes the coast of Bangladesh as being made up of four segments. The first segment proceeds in an easterly direction from the land border with India to the mouth of the Meghna River. The fourth segment proceeds in a south-southeasterly direction from the Lighthouse on Kutubdia Island to the land border with Myanmar. Between these two segments lie the second and third segments in the mouth of the Meghna River.

189. According to Myanmar, Bangladesh’s relevant coast is limited to the first and fourth segments. Myanmar rejects the second and third segments as parts of the relevant coast because those segments “face each other and therefore cannot possibly overlap with Myanmar’s maritime projections”. Myanmar compares these segments of Bangladesh’s coast to Ukraine’s coasts in the Gulf of Karkinits’ka in the Black Sea case, in which the ICJ excluded those coasts of Ukraine because they “face each other and their submarine extension cannot overlap with the extensions of Romania’s coasts” (Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports, 2009, p. 61, at p. 97, para. 100).

190. Measuring the coastal length by taking into account the coastline and its sinuosity, Myanmar finds that the first and fourth segments of Bangladesh’s coast are 203 kilometres and 161 kilometres long respectively. In Myanmar’s view, the total length of Bangladesh’s relevant coast is 364 kilometres.
191. Bangladesh submits that the analogy between the mouth of the Meghna River and the Gulf of Karkinits’ka is not accurate. In its view, while, in the enclosed setting of the Black Sea, “the opening at the mouth of the Gulf of Karkinits’ka faces back onto other portions of Ukraine’s coast, and not onto the delimitation area […], here, in contrast, the opening at the mouth of the Meghna faces directly onto the open sea and the delimitation area”. According to Bangladesh, the opening at the mouth of the Meghna River is much more like the opening at the mouth of the Bay of Fundy in the case concerning Delimitation of the Maritime Boundary in the Gulf of Maine, in which the Chamber of the ICJ deemed relevant “segments of Canada’s parallel coasts within the Bay as well as the line drawn across the Bay inside its mouth”.

192. According to Bangladesh, Myanmar’s relevant coast extends from the land boundary terminus in the Naaf River to the area of Bhiff Cape. Bangladesh regards Myanmar’s coast south of Bhiff Cape as irrelevant, because, in its view, the projection of that coast, which is more than 200 nm from Bangladesh, could not overlap with that of Bangladesh’s coast.

193. Bangladesh therefore maintains that Myanmar’s relevant coastal length, measured by means of a straight line, is 370 kilometres.

194. Myanmar asserts that its own relevant coast extends from the land boundary terminus between Myanmar and Bangladesh up to Cape Negrais. In particular, Myanmar emphasizes that its “relevant coast does not stop near Bhiff Cape”, but comprises the entire Rakhine (Arakan) coast, “from the Naaf River to Cape Negrais, the last point on Myanmar’s coast generating maritime projections overlapping with Bangladesh’s coastal projections”.

195. According to Myanmar, the arguments of Bangladesh to exclude the coast below Bhiff Cape “are quite simply wrong. It is not the relevant area that determines the relevant coast, it is the relevant coast that circumscribes the area to be delimited”. Myanmar asserts further that:

the relevant coasts cannot depend, or be determined by reference to the delimitation line. They logically precede it, and it is the delimitation line that must be determined by reference to the relevant coasts and the projections that these generate. Bangladesh has put the cart before the horse.

196. Myanmar also points out that Bangladesh, according to its own minutes, acknowledged during the negotiations between the Parties in November 2008 that “the relevant coastline for Myanmar in the Bay of Bengal is up to Cape Negrais”.

197. In Myanmar’s view, taking into account the coastline and its sinuosity, the total length of its own relevant coast from the estuary of the Naaf River to Cape Negrais is 740 kilometres.

* * *

198. The Tribunal notes at the outset that for a coast to be considered as relevant in maritime delimitation it must generate projections which overlap with those of the coast of another party.

199. The Parties are not in agreement in respect of the segments of Bangladesh’s coastline formed by the eastern and western shores of the Meghna River Estuary. They also disagree in respect of the segment of Myanmar’s coast that runs from Bhiff Cape to Cape Negrais.

Bangladesh’s relevant coast

200. The Tribunal does not agree with Myanmar’s position that the eastern and western shores of the Meghna River Estuary should not be treated as part of the relevant coast. In the present case, the situation is different from that of the Gulf of Karkinits’ka, where the coastal segments face each other. The Meghna River Estuary is open to the sea and generates projections that overlap with those of the coast of Myanmar. Accordingly, the shores of the
estuary must be taken into account in calculating the length of the relevant coast of Bangladesh.

201. The Tribunal concludes that the whole of the coast of Bangladesh is relevant for delimitation purposes, generating projections seaward that overlap with projections from the coast of Myanmar. To avoid difficulties caused by the complexity and sinuosity of that coast, it should be measured in two straight lines.

202. The Tribunal draws the first line from a point on Bangladesh’s coast on Mandabaria Island near the land boundary terminus with India, which was used by Myanmar as a base point (ß2) for the construction of its proposed equidistance line (see paragraph 243), to a point on Kutubdia Island (see paragraph 188). The second line extends from the said point on Kutubdia Island to the land boundary terminus with Myanmar in the Naaf River. As a result, the length of Bangladesh’s relevant coast is approximately 413 kilometres.

203. The Tribunal does not agree with Bangladesh’s position that Myanmar’s coastline south of Bhiff Cape should not be included in the calculation of Myanmar’s relevant coast. The Tribunal finds that the coast of Myanmar from the terminus of its land boundary with Bangladesh to Cape Negrais does, contrary to Bangladesh’s contention, indeed generate projections that overlap projections from Bangladesh’s coast. The Tribunal, therefore, determines that the coast of Myanmar from its land boundary terminus with Bangladesh to Cape Negrais is to be regarded as Myanmar’s relevant coast.

204. The Tribunal finds that Myanmar’s relevant coast should also be measured by two lines so as to avoid difficulties caused by the sinuosity of the coast and to ensure consistency in measuring the respective coasts of the Parties. The first line is measured from the land boundary terminus in the Naaf River to Bhiff Cape and the second line from this point to Cape Negrais. Accordingly, the Tribunal concludes that the length of the relevant coast of Myanmar, measured in two lines, is approximately 587 kilometres.

205. Having determined the relevant coasts of the Parties and their approximate length, the Tribunal finds that the ratio between these coastal lengths is approximately 1:1.42 in favour of Myanmar.
The Tribunal will now consider the method to be applied to the delimitation of the exclusive economic zone and the continental shelf in the case before it.

While the Parties agree that the provisions of the Convention concerning the delimitation of the exclusive economic zone and the continental shelf constitute the law applicable to the dispute between them, they disagree as to the appropriate method of delimitation.

Bangladesh recognizes that the equidistance method is used in appropriate circumstances as a means to achieve an equitable solution but claims that equidistance does not produce an equitable result in the present case.

Bangladesh challenges the validity of the equidistance method advocated by Myanmar for the delimitation of the exclusive economic zone and the continental shelf within 200 nm. It argues that the equidistance line is inequitable in the present case, adding that Myanmar so completely embraces the equidistance method as to go so far as to claim that “rights to maritime areas are governed by equidistance” and to elevate equidistance, merely one method of delimitation, into a rule of law of universal application.

Bangladesh observes that the use of the equidistance method “can under certain circumstances produce results that appear on the face of them to be extraordinary, unnatural or unreasonable” as stated in the North Sea Continental Shelf cases (Judgment, I.C.J. Reports 1969, p. 3, at p. 23, para. 24).

Bangladesh points out that concave coasts like those in the northern Bay of Bengal are among the earliest recognized situations where equidistance produces “irrational results” and refers in this regard to the case concerning Continental Shelf (Libyan Arab Jamahiriya/Malta), in which the ICJ
stated that an equidistance line “may yield a disproportionate result where a
coast is markedly irregular or markedly concave or convex” (Judgment, I.C.J.
Reports 1985, p. 13, at p. 44, para. 56). In the same case the ICJ pointed out
that equidistance is “not the only method applicable […]” and it does “not even
have the benefit of a presumption in its favour” (ibid, p. 13, at p. 47, para. 63).

212. Bangladesh also points to the case concerning Territorial and Maritime
Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua
v. Honduras), in which the ICJ stated that the equidistance method “does not
automatically have priority over other methods of delimitation and, in particular
circumstances, there may be factors which make the application of the
equidistance method inappropriate” (Judgment, I.C.J. Reports 2007, p. 659, at
p. 741, para. 272).

213. Bangladesh argues that, on account of the specific configuration of its
coast in the northern part of the Bay of Bengal and of the double concavity
characterizing it, the Tribunal should apply the angle-bisector method in
delimiting the maritime boundary between Bangladesh and Myanmar in the
exclusive economic zone and on the continental shelf. In its view, this method
would eliminate the inequity associated with equidistance and lead to an
equitable result.

214. Bangladesh further states that the ICJ first made use of the angle-
bisector method in the case concerning Continental Shelf (Tunisia/Libyan
Arab Jamahiriya) in 1982 and that the 1984 decision of the Chamber of the
ICJ in the case concerning Delimitation of the Maritime Boundary in the Gulf
of Maine Area is another instance of resort to that method. Likewise, the
Arbitral Tribunal in the case concerning the Delimitation of the maritime
boundary between Guinea and Guinea-Bissau (Decision of 14 February 1985,
ILR, Vol. 77, p. 635) applied the angle-bisector method in delimiting the
maritime boundaries at issue.

215. Bangladesh also quotes the case concerning the Territorial and
Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea
(Nicaragua v. Honduras) in support of its argument that the use of a bisector
“has proved to be a viable substitute method in certain circumstances where
equidistance is not possible or appropriate” (Judgment, I.C.J. Reports 2007,
p. 659, at p. 746, para. 287).

216. Bangladesh states that Myanmar’s claimed equidistance line is
inequitable because of the cut-off effect it produces. Bangladesh maintains
that, “[n]otwithstanding Bangladesh’s substantial 421 km coastline, the
equidistance lines claimed by its neighbours would prevent it from reaching
even its 200 [nm] limit, much less its natural prolongation in the outer
continental shelf beyond 200 [nm]”.

217. Bangladesh argues that the angle-bisector method, specifically the
215° azimuth line which it advocates for the delimitation of the maritime
boundary between Myanmar and itself on the continental shelf within 200 nm
and in the exclusive economic zone, “avoids the problems inherent in
equidistance without itself generating any inequities”.

218. In Myanmar’s view, the law of delimitation “has been considerably
completed, developed and made more specific” since the adoption of the
Convention in 1982. Myanmar contends that Bangladesh attempts to cast
doubt on the now well-established principles of delimitation of the exclusive
economic zone and the continental shelf. Myanmar further contends that
Bangladesh makes strenuous efforts to establish that the applicable law was
frozen in 1982 or, even better, in 1969, thus deliberately ignoring the
developments which have occurred over the past 40 years.

219. Myanmar states that “equidistance/relevant circumstances’ is not as
such a rule of delimitation properly said, but a method, usually producing an
equitable result”. Myanmar draws attention in this regard to the ICJ’s
judgment in the case concerning Territorial and Maritime Dispute between
Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)
220. Myanmar points out that, while Bangladesh relied on the judgment in the case concerning *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea* (*Nicaragua v. Honduras*), where the ICJ held that “the equidistance method does not automatically have priority over other methods of delimitation”, it failed to mention that the ICJ said in the same case: “[t]he jurisprudence of the Court sets out the reasons why the equidistance method is widely used in the practice of maritime delimitation: it has a certain intrinsic value because of its scientific character and the relative ease with which it can be applied”. (*Judgment, I.C.J. Reports 2007*, p. 659, at p. 741, para. 272). Myanmar adds that the ICJ in that same case applied the bisector method only after finding it “impossible for the Court to identify base points and construct a provisional equidistance line [...] delimiting maritime areas off the Parties’ mainland coasts” (*Ibid*, p. 659, at p. 743, para. 280).

221. Myanmar further observes that in the case concerning *Continental Shelf (Libyan Arab Jamahiriya/Malta)* the ICJ applied the equidistance/relevant circumstances method even after noting that equidistance “may yield a disproportionate result where a coast is markedly irregular or markedly concave or convex” (*Judgment, I.C.J Reports 1985*, p. 13, at p. 44, para. 56).

222. Myanmar requests the Tribunal to “apply the now well-established method for drawing an all-purpose line for the delimitation of the maritime boundary between the Parties”. Myanmar asserts that “[i]n the present case, no circumstance renders unfeasible the use of the equidistance method”. In support of this request, it refers to the *Black Sea* case (*Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, *Judgment, I.C.J. Reports 2009*, p. 61, at p. 101, para. 116).

223. Myanmar rejects the arguments advanced by Bangladesh that the equidistance line fails to take account of the relevant circumstances in the case, notably the cut-off effect it produces and the concavity of Bangladesh’s coast, and states that “[n]one of the reasons invoked by Bangladesh to set aside the usual method of drawing the maritime boundary between States has any basis in modern international law of the sea, the first step of which is to identify the provisional equidistance line”.

224. In Myanmar’s view, the angle-bisector method advanced by Bangladesh produces an inequitable result and Myanmar “firmly ... reiterate[s] that no reason whatsoever justifies recourse to the ‘angle-bisector method’ in the present case”.

* * *

225. The Tribunal observes that article 74, paragraph 1, and article 83, paragraph 1, of the Convention stipulate that the delimitation of the exclusive economic zone and the continental shelf respectively must be effected on the basis of international law in order to achieve an equitable solution, without specifying the method to be applied.

226. International courts and tribunals have developed a body of case law on maritime delimitation which has reduced the elements of subjectivity and uncertainty in the determination of maritime boundaries and in the choice of methods employed to that end.

227. Beginning with the *North Sea Continental Shelf* cases, it was emphasized in the early cases that no method of delimitation is mandatory, and that the configuration of the coasts of the parties in relation to each other may render an equidistance line inequitable in certain situations. This position was first articulated with respect to the continental shelf, and was thereafter maintained with respect to the exclusive economic zone as well.

228. Over time, the absence of a settled method of delimitation prompted increased interest in enhancing the objectivity and predictability of the process. The varied geographic situations addressed in the early cases nevertheless confirmed that, even if the pendulum had swung too far away from the objective precision of equidistance, the use of equidistance alone
could not ensure an equitable solution in each and every case. A method of delimitation suitable for general use would need to combine its constraints on subjectivity with the flexibility necessary to accommodate circumstances in a particular case that are relevant to maritime delimitation.

229. In the case concerning *Maritime Delimitation in the Area between Greenland and Jan Mayen*, the ICJ expressly articulated the approach of dividing the delimitation process into two stages, namely “to begin with the median line as a provisional line and then to ask whether special circumstances require any adjustment or shifting of that line” (*Judgment, I.C.J. Reports* 1993, p. 38, at p. 61, para. 51). This general approach has been found to be suitable for use in most of the subsequent judicial and arbitral delimitations. As developed in those cases, it has come to be known as the *equidistance/relevant circumstances* method.


231. The Arbitral Tribunal in the Arbitration between Barbados and the Republic of Trinidad and Tobago, affirmed that “[t]he determination of the line of delimitation [...] normally follows a two-step approach,” involving the *equidistance/relevant circumstances* method. The Tribunal further pointed out that "while no method of delimitation can be considered of and by itself justifiable” (*Decision of 11 April 2006, RMA, Vol. XXVII, p. 147, para. 214, and at p. 230, para. 306).

232. Similarly, the Arbitral Tribunal in the case between Guyana and Suriname noted:

233. In the Black Sea case, the ICJ built on the evolution of the jurisprudence on maritime delimitation. In that case, the ICJ gave a description of the three-stage methodology which it applied. At the first stage, a geometrically objective and also appropriate for the geography of the area to be delimited, an equidistance line will be drawn unless there are compelling reasons that make it unequitable in the particular case (*Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports* 2009, p. 61, at p. 101, para. 116). At the second stage, the ICJ ascertained whether there are factors calling for the adjustment or shifting of the provisional equidistance line in order to achieve an equitable result (*ibid., at pp. 101, para. 128). At the third stage, it verified that the delimitation line did not lead to an inequitable result by reason of any marked disproportion between the ratio of the respective coastal lengths and the ratio between the relevant maritime area of each State by reference to the delimitation line (*ibid., at p. 103, para. 122).

234. The Tribunal notes that, as an alternative to the *equidistance/relevant circumstances* method, which is reflected an approximation of the equidistance method, international courts and tribunals have applied the angle-bisector method, which is an approximation of the respective ratio of the relevant maritime area of each State by reference to the delimitation line.

235. The Tribunal observes that the issue of which method should be followed in drawing the maritime delimitation line should be considered in light of the circumstances of each case. The goal of achieving an equitable result must be the paramount consideration guiding the action of the Tribunal in this connection. Therefore the method to be followed should be one that, under the prevailing geographic realities and the particular circumstances of each case, can lead to an equitable result.

236. When the angle bisector method is applied, the terminus of the land boundary and the generalization of the direction of the respective coasts of the Parties from that terminus determine the angle and therefore the direction of the bisector. Different hypotheses as to the general direction of the respective coasts of the Parties from the terminus of the land boundary will often produce different angles and bisectors.

237. Bangladesh’s approach of constructing the angle at the terminus of the land boundary between the Parties with reference to the ends of their respective relevant coasts produces a markedly different bisector once it is recognized that Myanmar’s relevant coast extends to Cape Negrais, as decided by the Tribunal in paragraph 203. The resultant bisector fails to give adequate effect to the southward projection of the coast of Bangladesh.

238. The Tribunal notes that jurisprudence has developed in favour of the equidistance/relevant circumstances method. This is the method adopted by international courts and tribunals in the majority of the delimitation cases that have come before them.

239. The Tribunal finds that in the present case the appropriate method to be applied for delimiting the exclusive economic zone and the continental shelf between Bangladesh and Myanmar is the equidistance/relevant circumstances method.

240. In applying this method to the drawing of the delimitation line in the present case, the Tribunal, taking into account the jurisprudence of international courts and tribunals on this matter, will follow the three stage-approach, as developed in the most recent case law on the subject. Accordingly, the Tribunal will proceed in the following stages: at the first stage it will construct a provisional equidistance line, based on the geography of the Parties’ coasts and mathematical calculations. Once the provisional equidistance line has been drawn, it will proceed to the second stage of the process, which consists of determining whether there are any relevant circumstances requiring adjustment of the provisional equidistance line; if so, it will make an adjustment that produces an equitable result. At the third and final stage in this process the Tribunal will check whether the line, as adjusted, results in any significant disproportion between the ratio of the respective coastal lengths and the ratio of the relevant maritime areas allocated to each Party.

Establishment of the provisional equidistance line

Selection of base points

241. The Tribunal will now proceed with the construction of its own provisional equidistance line. The first step to be taken in this regard is to select the base points for the construction of that line.
242. Bangladesh did not identify any base points, because it did not construct a provisional equidistance line and therefore saw no need to select base points on the Bangladesh or Myanmar coasts.

243. Myanmar identified two relevant base points on the coast of Bangladesh “representing the most advanced part of the land (low water line) into the sea”. These two base points are:

- (β1) the closest point to the starting-point of the maritime boundary (Point A) located on the low water line of Bangladesh’s coast, base point β1 (co-ordinates 20°43'28.1"N, 92°19'40.1"E) [...]; and
- (β2) the more stable point located on Bangladesh coast nearest to the land boundary with India, base point β2 (co-ordinates 21°38'57.4" N, 89°14'47.6" E).

244. Myanmar points out that base point β2 is, according to Bangladesh, located on a coast characterized by a very active morpho-dynamism. Myanmar notes that Bangladesh “expresses concern that ‘the location of base point β2 this year might be very different from its location next year’”. Myanmar adds that “it is difficult to detect any change in the location of β2 in the sixteen years from 1973 to 1989”. Myanmar observes that satellite images show that the β2 area is quite stable.

245. Myanmar identifies three base points on its own coast and describes them as follows:

- (μ1) at the mouth of the Naaf River, the closest point of the starting-point of the maritime boundary (Point A) located on the low water line of Myanmar’s coast, base point μ1 (co-ordinates 20°41'28.2" N, 92°22'47.8" E) [...]
- (μ2) Kyaukpyu (Sittwe) Point, located on the landward/low water line most seaward near Kyaukpyu Village, base point μ2 (co-ordinates 20°33'02.5" N, 92°31'17.6" E) [...]
- (μ3) at the mouth of the May Yu River (close to May Yu Point), base point μ3 (co-ordinates 20°14'31.0" N, 92°43'27.8" E) [...].

246. Myanmar asserts that any base points on Bangladesh’s mainland coast and coastal islands could be considered legally appropriate base points, but because β1 is nearer to the provisional equidistance line, the other potential base points are not relevant. Myanmar notes that on its own side the same is true of base points on the coastal features south of base point μ3. These potential base points on the coasts were eliminated on the basis of the objective criterion of distance.

247. Myanmar states that several other base points were eliminated for legal reasons. With reference to South Talpatty, Myanmar explains that it could have been:

a potential source of relevant base points because of its relatively seaward location. Yet, as a legal matter, South Talpatty cannot be a source of base points for two reasons. First, the sovereignty of this feature is disputed between Bangladesh and India. Second, [...] it is not clear whether the coastal feature - which may have existed in 1973 - still exists.

248. According to Myanmar, there is a second example of a set of coastal features that are potential sources of relevant base points but were nonetheless excluded from the calculation of the equidistance line. These are “the low-tide elevations around the mouth of the Naaf River, the Cypress Sands, and Sitaparokia Patches, off Myanmar’s coast”.

249. Myanmar points out that “[n]either Party used base points on those low-tide elevations”, despite the fact that they are legitimate sources of base points for measuring the breadth of the territorial sea and are nearer to the territorial sea equidistance line than the base points on the mainland coasts.

250. Myanmar explains that these low-tide elevations are also nearer the provisional equidistance line than either base point β1 or μ1. Myanmar states that “they cannot be used, as a legal matter,” for the purpose of constructing the provisional equidistance line.

251. Myanmar submits that Myanmar’s May Yu Island and Bangladesh’s St. Martin’s Island “must be eliminated as sources of base points”. Myanmar acknowledges that both features are legitimate sources of normal baselines for measuring the breadth of the territorial sea, and both would otherwise have provided the nearest base points, that is, the relevant base points, for...
the construction of the provisional equidistance line. Myanmar, however, concludes that “the technical qualities of these features cannot overcome their legal deficiencies”.

251. In the view of Myanmar, “the use of these anomalous features in the construction of the provisional equidistance line would create a line that would be […] wholly inconsistent with the dominant geographic realities in the area”. Myanmar states that Bangladesh is correct in arguing that, if these islands were used in the construction of the provisional equidistance line, the entire course of that line would be determined by these two features alone.

252. Bangladesh maintains that:

Myanmar's proposed equidistance line is also problematic because it is drawn on the basis of just four coastal base points, three on Myanmar's coast and only one – base point β1 – on the Bangladesh coast, which Myanmar places very near the land boundary terminus between Bangladesh and Myanmar in the Naaf River.

253. According to Bangladesh, Myanmar “takes pains to make it appear as though it actually uses two Bangladesh base points in the plotting of the equidistance line”. Bangladesh contends that Myanmar does not “show the effect of alleged base point β2 on its proposed delimitation line, because it has none”. Bangladesh observes that “[b]ase point β2 never actually comes into play in Myanmar’s proposed delimitation”.

254. Bangladesh asserts that it would be remarkable to base a delimitation on a single coastal base point and that, after a review of the jurisprudence and State practice, Bangladesh was unable to find even one example where a delimitation extending so far from the coast was based on just one base point. Bangladesh concludes by noting that, “in the Nicaragua v. Honduras case, the ICJ drew a bisector precisely to avoid such a situation”.

255. In the view of Bangladesh, the lack of potential base points on the Bangladesh coast is a function of the concavity of that coast and that after base point β1, the coast recedes into the mouth of the Meghna estuary. It adds that there is thus nothing to counteract the effect of Myanmar’s coast south of the land boundary terminus and that the concavity of Bangladesh’s coast results in there being no protuberant coastal base points.

256. Bangladesh points out that the consequence can be seen in the effect of Myanmar’s equidistance line as it moves further and further from shore, becoming, as a result, increasingly prejudicial to Bangladesh, and increasingly inequitable.

257. Bangladesh contends that “[t]here is no legal basis for an a priori assumption that St. Martin’s Island should be ignored in the drawing of Myanmar’s equidistance line”. Bangladesh notes that St. Martin’s island “is a significant coastal feature that indisputably generates entitlement in the continental shelf and EEZ”. Bangladesh therefore concludes that “[t]here are thus no grounds, other than Myanmar’s self-interest, for excluding it in the plotting of a provisional equidistance line, where, in the first instance, all coastal features are included”.

258. Myanmar responds that five base points were sufficient in the Black Sea case to delimit a boundary stretching well over 100 nm from start to finish. It states that in other delimitations, especially those between adjacent coasts, even fewer base points have been used: three base points were used for the 170 nm western section of the boundary in the Delimitation of the Continental Shelf between United Kingdom of Great Britain and Northern Ireland, and the French Republic (Decision of 30 June 1977, RIAA, Vol. XVIII, p. 3, Annex, Technical Report to the Court, p. 126, at pp. 128-129), and just two base points were used to construct the provisional equidistance line in the case concerning the Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening) (Merits, Judgment, I.C.J. Reports 2002, p. 303, at p. 443, para. 292).
259. The Tribunal will first select the base points to be used for constructing the provisional equidistance line.

260. As noted in paragraph 242, Bangladesh did not identify any base points for the construction of a provisional equidistance line.

261. The Tribunal notes Bangladesh’s contentions that Myanmar does not show the effect on its proposed delimitation line of base point β2, located on the southern tip of Mandalabaria Island, near the land boundary between Bangladesh and India, because that point has none, and that base point β2 never actually comes into play in Myanmar’s proposed delimitation.

262. The Tribunal further notes that the observation made by Bangladesh concerning Myanmar’s β2 base point does not amount to a disagreement with the selection of that point; rather, it is a criticism by Bangladesh that Myanmar does not use that base point in its construction of the equidistance line.

263. The Tribunal notes that, while Bangladesh argues that the number of base points selected by Myanmar is insufficient for the construction of an equidistance line, Bangladesh does not question the five base points selected by Myanmar.

264. The Tribunal observes that, while coastal States are entitled to determine their base points for the purpose of delimitation, the Tribunal is not obliged, when called upon to delimit the maritime boundary between the parties to a dispute, to accept base points indicated by either or both of them. The Tribunal may establish its own base points, on the basis of the geographical facts of the case. As the ICJ stated in the Black Sea case:

[[i]n [...] the delimitation of the maritime areas involving two or more States, the Court should not base itself solely on the choice of base points made by one of those Parties. The Court must, when delimiting the continental shelf and the exclusive economic zones, select base points by reference to the physical geography of the relevant coasts (Maritime Delimitation in the Black Sea

265. Concerning the question whether St. Martin’s Island could serve as the source of a base point, the Tribunal is of the view that, because it is located immediately in front of the mainland on Myanmar’s side of the Parties’ land boundary terminus in the Naaf River, the selection of a base point on St. Martin’s Island would result in a line that blocks the seaward projection from Myanmar’s coast. In the view of the Tribunal, this would result in an unwarranted distortion of the delimitation line, and amount to “a judicial refashioning of geography” (ibid., at p. 110, para. 149). For this reason, the Tribunal excludes St. Martin’s Island as the source of any base point.

266. The Tribunal is satisfied that the five base points selected by Myanmar are the appropriate base points on the coasts of the Parties for constructing the provisional equidistance line. In addition, the Tribunal selects a new base point μ4, which is appropriate for the last segment of the provisional equidistance line. This base point is identified on the basis of the Admiralty Chart 817 and is situated on the southern tip of the island of Myay Ngu Kyun, at Boronga Point. Its coordinates are: 19° 48' 49.8" N, 93° 01' 33.6" E. The Tribunal will start the construction of a provisional equidistance line by using the following base points:

On the coast of Myanmar:

μ1: 20° 41' 28.2" N, 92° 22' 47.8" E;
μ2: 20° 33' 02.5" N, 92° 31' 17.6" E;
μ3: 20° 14' 31.0" N, 92° 43' 27.8" E; and
μ4: 19° 48' 49.8" N, 93° 01' 33.6" E.

On the coast of Bangladesh:

β1: 20° 43' 28.1" N, 92° 19' 40.1" E; and
β2: 21° 38' 57.4" N, 89° 14' 47.6" E.

Construction of the provisional equidistance line

267. In its written pleadings, Myanmar draws the provisional equidistance line as follows:

- from Point E (the point at which the equidistance line meets the 12-nm arc from the coastline of St. Martin’s Island) with co-ordinates 20° 26’ 42.4” N, 92° 09’ 53.6” E, it continues (following a geodetic azimuth of 214° 08’ 17.5”) until it reaches Point F with co-ordinates 20° 13’ 06.3” N, 92° 00’ 07.6” E, where it becomes affected by the base points β1, μ1 and μ2;

- from Point F the equidistance line continues in a south-westerly direction (geodetic azimuth 223° 28’ 03.5”) to Point G, with co-ordinates 19° 45’ 36.7” N, 91° 32’ 38.1” E, where the line becomes affected by the base point μ3;

- from Point G, the equidistance line continues in direction of Point Z, with co-ordinates 18° 31’ 12.5” N, 89° 53’ 44.9” E, which is controlled by base points μ3, β2, and β1.

268. Myanmar’s final submissions describe the last segment of its proposed delimitation as follows:

From Point G, the boundary line continues along the equidistance line in a south-west direction following a geodetic azimuth of 231° 37’ 50.9” until it reaches the area where the rights of a third State may be affected.

269. Bangladesh argues that this suggests that Myanmar’s “proposed delimitation continues along a 232° line throughout its course, no matter where the rights of a third State may be determined to come into play, but that is not an accurate description of the line Myanmar purports to be drawing”.

270. Bangladesh asserts that Myanmar’s proposed Point Z coincides almost exactly with the location at which Myanmar’s proposed equidistance line intersects with India’s most recent claim line.
The Tribunal will now construct its provisional equidistance line from base points situated on the coasts of the Parties. For this purpose, it will employ the base points it identified in paragraph 266.

The provisional equidistance line starts at a point in the Naaf River lying midway between the closest base points on the coasts of the Parties, namely point β1 on the Bangladesh coast and point µ1 on the Myanmar coast. The coordinates of the starting point are 20° 42’ 28.2” N, 92° 21’ 14.0” E.

The provisional equidistance line within 200 nm from the baselines from which the territorial seas of the Parties are measured is defined by the following turning points at which the direction of the line changes and which are connected by geodetic lines:

- point T1 which is controlled by base points β1, µ1 and µ2 and which has the coordinates 20° 13’ 06.3” N, 92° 00’ 07.6” E;

- point T2 which is controlled by base points β1, µ2 and µ3 and which has the coordinates 19° 45’ 36.7” N, 91° 32’ 38.1” E; and

- point T3 which is controlled by base points β1, β2 and µ3 and which has the coordinates 18° 31’ 12.5” N, 89° 53’ 44.9” E.

From turning point T3, the course of the provisional equidistance line within 200 nm from the baselines of the Parties from which their territorial seas are measured comes under the influence of the additional new base point µ4, as identified by the Tribunal. From turning point T3, the provisional equidistance line follows a geodetic line starting at an azimuth of 202° 56’ 22” until it reaches the limit of 200 nm.
Relevant circumstances

275. Having drawn the provisional equidistance line, the Tribunal will now consider whether there are factors in the present case that may be considered relevant circumstances, calling for an adjustment of that line with a view to achieving an equitable solution. The Tribunal notes in this regard that the Parties differ on the issue of relevant circumstances.

276. Bangladesh points out three main geographical and geological features that characterize the present case and are relevant to the delimitation in question. The first of these is the "concave shape of Bangladesh’s coastline", extending from the land boundary terminus with India in the west to the land boundary terminus with Myanmar in the east. The Bangladesh coast is further marked by "a second concavity, that is a concavity within the overall concavity of its coastline". The second major geographical feature is St. Martin’s Island, a significant coastal island lying within 5 nm of the Bangladesh mainland. The third major distinguishing feature is the Bengal depositional system, which comprises "both the landmass of Bangladesh and its uninterrupted geological prolongation into and throughout the Bay of Bengal".

277. Bangladesh maintains that "it is not possible to delimit the boundary in a manner that achieves an equitable solution without taking each of these three features duly into account". In Bangladesh’s view, these features should be taken into account "as a relevant circumstance in fashioning an equitable delimitation within 200 miles, and should inform the delimitation of the outer continental shelf as between Bangladesh and Myanmar beyond 200 miles".

278. For its part, Myanmar contends that "there does not exist any relevant circumstance that may lead to an adjustment of the provisional equidistance line".

Concavity and cut-off effect

279. Bangladesh argues that "[t]he effect of the double concavity is to push the two equidistance lines between Bangladesh and its neighbours together", and that it "is not only left with a wedge of maritime space that narrows dramatically to seaward but it is also stopped short of its 200-[nm] limit".

280. Bangladesh observes that "Myanmar deploys two, not entirely consistent, arguments to deny [the] relevance [of the concavity]", namely, first that "there is no appreciable concavity and, second, that the concavity is legally irrelevant in any event". Bangladesh is of the view that "[b]oth assertions are incorrect".

281. With respect to the first argument, Bangladesh points out that it contradicts what Myanmar said in its own Counter-Memorial, which expressly acknowledged the doubly concave nature of Bangladesh’s coast.

282. As to the second argument, Bangladesh observes that the only ostensible jurisprudential basis for this claim of Myanmar is the ICJ’s decision in Cameroon v. Nigeria. Bangladesh points out that while, in that case, the ICJ found expressly that the portion of the coast relevant to the delimitation was not concave, it also stated that "[t]he Court does not deny that the concavity of the coastline may be a circumstance relevant to the delimitation" (Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening), Judgment, I.C.J. Reports 2002, p. 303, at p. 445, para. 297).

283. Bangladesh submits that the cut-off effect is as prejudicial to it as was the cut-off effect to Germany in the North Sea cases and that "[t]he reality is then that equidistance threatens Bangladesh with a more severe cut-off than Germany".

284. Bangladesh also relies on the award in the case concerning Delimitation of the maritime boundary between Guinea and Guinea-Bissau,
noting that, although in that case “[t]he equidistance lines between Guinea and its two neighbours did not fully cut Guinea off within 200 miles”, […] “the relief the tribunal gave Guinea is considerable, certainly far greater than anything that Bangladesh is seeking in this case”.

285. Bangladesh draws attention to State practice in instances where a State is “pinched” in the middle of a concavity and would have been cut off, had the equidistance method been used, and “[t]he maritime boundaries that were ultimately agreed discarded equidistance in order to give the middle State access to its 200-[nm] limit”. It refers in this regard to the 1975 agreed delimitation between Senegal and The Gambia on the coast of West Africa, the 1987 agreed boundaries in the Atlantic Ocean between Dominica and the French islands of Guadeloupe and Martinique, the 1984 agreement between France and Monaco, the 2009 memorandum of understanding between Malaysia and Brunei, and the 1990 agreement between Venezuela and Trinidad and Tobago.

286. In response to Myanmar’s assertion that, as political compromises, “these agreements have no direct applicability to the questions of law now before the Tribunal”, Bangladesh argues that “[i]t is impossible not to draw the conclusion that these agreements, collectively or individually, evidence a broad recognition by States in Africa, in Europe, in the Americas, and in the Caribbean that the equidistance method does not work in the case of States trapped in the middle of a concavity”.

287. In relation to Myanmar’s reference to “the practice in the region” – the 1978 agreements among India, Indonesia and Thailand in the Andaman Sea; the 1971 agreement among Indonesia, Malaysia and Thailand in the Northern Part of the Strait of Malacca; and the 1993 agreement among Myanmar, India and Thailand in the Andaman Sea – as support for the contention that cut-offs within 200 miles are common, Bangladesh maintains that these agreements do not support Myanmar’s proposition.

288. While recognizing that it is a fact that the “coastlines of Bangladesh taken as a whole are concave”, Myanmar states that “the resulting enclaving effect is not as dramatic as Bangladesh claims” and that “there does not exist any relevant circumstance that may lead to an adjustment of the provisional equidistance line”. It observes in this regard that “[u]nless we completely refashion nature […] this concavity cannot be seen as a circumstance calling for a shift of the equidistance line”.

289. Myanmar submits that the test of proportionality – or, more precisely, the absence of excessive disproportionality – confirms the equitable character of the solution resulting from the provisional equidistance line. It further argues that this line drawn in the first stage of the equidistance/relevant circumstances method meets the requirement of an equitable solution imposed by articles 74 and 83 of the Convention. Therefore, it is not necessary to modify or adjust it in the two other stages.

290. The Tribunal will now consider whether the concavity of the coast of Bangladesh constitutes a relevant circumstance warranting an adjustment of the provisional equidistance line.

291. The Tribunal observes that the coast of Bangladesh, seen as a whole, is manifestly concave. In fact, Bangladesh’s coast has been portrayed as a classic example of a concave coast. In the North Sea cases, the Federal Republic of Germany specifically invoked the geographical situation of Bangladesh (then East Pakistan) to illustrate the effect of a concave coast on the equidistance line (I.C.J. Pleadings, North Sea Continental Shelf, Vol. I, p. 42).

292. The Tribunal notes that in the delimitation of the exclusive economic zone and the continental shelf, concavity per se is not necessarily a relevant circumstance. However, when an equidistance line drawn between two States produces a cut-off effect on the maritime entitlement of one of those States,
as a result of the concavity of the coast, then an adjustment of that line may be necessary in order to reach an equitable result.

The Tribunal further notes that, on account of the concavity of the coast in question, the provisional equidistance line it constructed in the present case does produce a cut-off effect on the maritime projection of Bangladesh and that the line if not adjusted would not result in achieving an equitable solution, as required by articles 74 and 83 of the Convention.

This problem has been recognized since the decision in the North Sea cases, in which the ICJ explained that “it has been seen 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. 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” (North Sea Continental Shelf, Judgment, I.C.J. Reports 1969, p. 3, at p. 49, para. 89).

In this regard, the ICJ observed that “in the case of a concave or recessing coast [...], the effect of the use of the equidistance method is to pull the line of the boundary inwards, in the direction of the concavity”, causing the area enclosed by the equidistance lines “to take the form approximately of a triangle with its apex to seaward and, as it was put on behalf of the Federal Republic, ‘cutting off’ the coastal State from the further areas of the continental shelf outside of and beyond this triangle” (ibid., at p. 17, para. 8).

Likewise, in the case concerning the Delimitation of the Maritime Boundary Between Guinea and Guinea-Bissau, the Arbitral Tribunal stated that “[w]hen in fact [...] there are three adjacent States along a concave coastline, the equidistance method has the other drawback of resulting in the middle country being enclaved by the other two and thus prevented from extending its maritime territory as far seaward as international law permits”. (Decision of 14 February 1985, ILR, Vol. 77, p. 635, at p. 682, para. 104)

The Tribunal finds that the concavity of the coast of Bangladesh is a relevant circumstance in the present case, because the provisional equidistance line as drawn produces a cut-off effect on that coast requiring an adjustment of that line.

St. Martin’s Island

Bangladesh argues that St. Martin’s Island is one of the important geographical features in the present case and that “[a]ny line of delimitation that would ignore [this island] is inherently and necessarily inequitable”.

Bangladesh maintains that “if, contrary to [its] view, equidistance is not rejected,” then St Martin’s Island must be given full weight in any solution based on an equidistance line and “that even this is not enough to achieve the equitable solution that is required by the 1982 Convention”.

Bangladesh submits that, “whether or not an island can be characterized as being ‘in front of’ one coast or another does not in itself determine whether it is a special or a relevant circumstance”. It refers in this regard to the Case concerning the Delimitation of the Continental Shelf between United Kingdom of Great Britain and Northern Ireland, and the French Republic, in which the Court of Arbitration observed that the pertinent question is whether an island would produce “an inequitable distortion of the equidistance line producing disproportionate effects on the areas of shelf accruing to the two States” (Decision of 30 June 1977, RIAA, Vol. XVIII, p. 3, at p. 113, para. 243).

Bangladesh submits that “St. Martin’s Island is as much in front of the Bangladesh coast as it is in front of Myanmar’s coast” and states that the case law supports this view. In this regard Bangladesh notes that Myanmar describes the French island of Ushant as being located in front of the French coast, when in fact Ushant lies 10 miles off France’s Brittany coast, further
than St. Martin’s Island is from Bangladesh, and observes moreover that the Scilly Isles are 21 miles off the United Kingdom coast.

302. Bangladesh states that “Myanmar’s proposition that a finding of special or relevant circumstance is more likely when an island lies closer to the mainland is wrong” and that, “[i]n fact, it is when islands lie outside a State’s 12-[nm] territorial sea that they have been treated as relevant circumstances and given less than full effect in the [exclusive economic zone] and continental shelf delimitations”.

303. Bangladesh contends that what really matters is a “contextualized assessment” of an island’s effect in the particular circumstances of a given case and that, to the contrary of what Myanmar claims, it is the elimination of St. Martin’s Island that disproportionately affects Myanmar’s delimitation exercise, and renders it even more inequitable than it already is.

304. Responding to Myanmar’s contention that no island in a position analogous to that of St. Martin’s Island has ever been considered as a relevant circumstance, Bangladesh, citing jurisprudence in support, states that:

- the Channel Islands in the case of Delimitation of the continental shelf between France and the United Kingdom in 1977;
- the island of Djerba in the case of Tunisia v. Libya settled in 1982;
- the island of Filfla in the case of Libya v. Malta settled in 1985;
- the island of Abu Musa in the award between Dubai and Sharjah in 1981;
- the Yemeni Islands in the arbitration between Eritrea v. Yemen in 1999;
- the island of Qit at Jaradah in the case of Qatar v. Bahrain in 2001;
- Sable Island in the arbitration of 2002 between the province of Newfoundland and Labrador;
- Serpent’s Island in the case of Romania v. Ukraine in 2009;

305. Bangladesh notes that the ICJ and arbitral tribunals have developed a clear and common approach to the determination of whether an island exerts such a distorting effect on the provisional equidistance line and must be disregarded or given less than full weight in the delimitation.

306. Bangladesh explains further that “[t]wo elements are required” for the island to be disregarded or given less than full weight:

(1) the deflection of the equidistance line directly across another State’s coastal front; and (2) the cut-off of that State’s seaward access.

307. Bangladesh is of the view that a provisional equidistance line that includes St. Martin’s “does cut across somebody’s coastal front, and does cause a significant cut-off effect – but the effect is not on Myanmar”. It is for Bangladesh, not Myanmar, that the provisional equidistance line needs to be adjusted so as to achieve the equitable solution required by the Convention.

308. Bangladesh explains that the pertinent question is not whether a particular feature affects the provisional equidistance line but whether it distorts the line and concludes by stating that “St Martin’s does not distort the line”.

309. Myanmar, in turn, emphasizes “the unique position of St Martin’s Island, which has three characteristic elements: it is close to the land boundary and therefore to the starting point of the equidistance line; it has the very exceptional feature of being on the wrong side of the equidistance line and also on the wrong side of the bisector claimed by Bangladesh; and, finally, the mainland coasts to be delimited are adjacent, not opposite”.

[...]

...
Myanmar contends that “[t]hose three elements together create a serious, very excessive distorting effect on delimitation”.

310. Myanmar notes that “Bangladesh has never included St. Martin’s Island in its coastal façade or in the description of its relevant coast”, Myanmar points out that Bangladesh had stated in its Reply that “its relevant coast extends, from west to east, from the land boundary terminus with India to the land boundary terminus on the other side on the Naaf River” and had not mentioned St. Martin’s Island. Myanmar points out in this regard that “[t]his makes even more curious the claim made […] that the island is ‘an integral part of the Bangladesh coast’”.

311. Myanmar observes that the location of St. Martin’s Island and the effect that it produces “make it a special circumstance in the case of the delimitation of the territorial sea”, which explains the care taken by Myanmar to give it the effect that is most appropriate to its unique location; and “the same considerations lead to it not being accorded more effect in the framework of the delimitation of the exclusive economic zones”.

312. On the issue of the effect that islands have on delimitation of the exclusive economic zone and the continental shelf, Myanmar points out that if one looks “closely at how case law has applied the methodology, […] no island in the position of St Martin’s Island has ever been considered, in the first stage of the process, as an island that should have effect in drawing an equidistance line beyond the territorial sea, or in the second stage of the process as a relevant circumstance”.

313. Myanmar asserts that “[i]n almost all the cases that have been adjudged, the islands in question […] have not been considered to be coastal islands” and “were not given any effect on the construction of the equidistance line beyond the territorial sea”.

314. Myanmar points out that St. Martin’s Island, which is 5 kilometres long, would by itself generate at least 13,000 square kilometres of maritime area for Bangladesh in the framework of the delimitation between continental masses, a result which, according to Myanmar, is manifestly disproportionate.

315. Myanmar argues that “if […] effect were to be given to St. Martin’s Island” in the delimitation of the exclusive economic zone and the continental shelf between Myanmar and Bangladesh, “this would produce a disproportionate result”, citing the Dubai/Sharjah Border Arbitration (Award of 19 October 1981, ILR, Vol. 91, p. 543, at p. 677), the case concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta) (Judgment, I.C.J. Reports 1985, p. 13, at p. 48, para. 64), the case concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Merits, Judgment, I.C.J. Reports 2001, p. 40, at pp. 104-109, para. 219) and the Black Sea case (Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009, p. 61, at p. 122-128, para. 185).

* * *

316. The Tribunal will now consider whether St. Martin’s Island, in the circumstances of this case, should be considered a relevant circumstance warranting an adjustment of the provisional equidistance line.

317. The Tribunal observes that the effect to be given to an island in the delimitation of the maritime boundary in the exclusive economic zone and the continental shelf depends on the geographic realities and the circumstances of the specific case. There is no general rule in this respect. Each case is unique and requires specific treatment, the ultimate goal being to reach a solution that is equitable.

318. St. Martin’s Island is an important feature which could be considered a relevant circumstance in the present case. However, because of its location, giving effect to St. Martin’s Island in the delimitation of the exclusive economic zone and the continental shelf would result in a line blocking the seaward projection from Myanmar’s coast in a manner that would cause an unwarranted distortion of the delimitation line. The distorting effect of an island
on an equidistance line may increase substantially as the line moves beyond 12 nm from the coast.

319. For the foregoing reasons, the Tribunal concludes that St. Martin’s Island is not a relevant circumstance and, accordingly, decides not to give any effect to it in drawing the delimitation line of the exclusive economic zone and the continental shelf.

_Bengal depositional system_

320. As regards the Bengal depositional system, Bangladesh states that the physical, geological and geomorphological connection between Bangladesh’s land mass and the Bay of Bengal sea floor is so clear, so direct and so pertinent, that adopting a boundary in the area within 200 nm that would cut off Bangladesh, and deny it access to, and rights in the area beyond, would constitute a grievous inequity.

321. Myanmar rejects Bangladesh’s contention that the Bengal depositional system is a relevant circumstance, stating that this is a “very curious” special circumstance. It points out that Bangladesh itself admits that within 200 nm entitlement is, by operation of article 76, paragraph 1, of the Convention, determined purely by reference to distance from the coast.

322. The Tribunal does not consider that the Bengal depositional system is relevant to the delimitation of the exclusive economic zone and the continental shelf within 200 nm. The location and direction of the single maritime boundary applicable both to the seabed and subsoil and to the superjacent waters within the 200 nm limit are to be determined on the basis of geography of the coasts of the Parties in relation to each other and not on the geology or geomorphology of the seabed of the delimitation area.

_Adjustment of the provisional equidistance line_

323. As noted by the Tribunal in paragraph 291, the coast of Bangladesh between its land boundary terminus with Myanmar at the mouth of the Naaf River and its land boundary terminus with India is decidedly concave. This concavity causes the provisional equidistance line to cut across Bangladesh’s coastal front. This produces a pronounced cut-off effect on the southward maritime projection of Bangladesh’s coast that continues throughout much of the delimitation area.

324. The Tribunal recalls that it has decided earlier in this Judgment (see paragraph 297) that the concavity which results in a cut-off effect on the maritime projection of Bangladesh is a relevant circumstance, requiring an adjustment of the provisional equidistance line.

325. The Tribunal, therefore, takes the position that, while an adjustment must be made to its provisional equidistance line to abate the cut-off effect of the line on Bangladesh’s concave coast, an equitable solution requires, in light of the coastal geography of the Parties, that this be done in a balanced way so as to avoid drawing a line having a converse distorting effect on the seaward projection of Myanmar’s coastal façade.

326. The Tribunal agrees that the objective is a line that allows the relevant coasts of the Parties “to produce their effects, in terms of maritime entitlements, in a reasonable and mutually balanced way” (Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009, p. 61, at p. 127, para. 201).

327. The Tribunal notes that there are various adjustments that could be made within the relevant legal constraints to produce an equitable result. As the Arbitral Tribunal observed in the Arbitration between Barbados and Trinidad and Tobago, “[t]here are no magic formulas” in this respect (Decision of 11 April 2006, RIAA, Vol. XXVII, p. 147, at p. 243, para. 373).
328. Having concluded that the overlapping projections from the coasts of the Parties extend to the limits of their respective exclusive economic zones and continental shelves, the Tribunal considered how to make the adjustment to the provisional equidistance line in that light.

329. The Tribunal decides that, in view of the geographic circumstances in the present case, the provisional equidistance line is to be deflected at the point where it begins to cut off the seaward projection of the Bangladesh coast. The direction of the adjustment is to be determined in the light of those circumstances.

330. The fact that this adjustment may affect most of the line in the present case is not an impediment, so long as the adjustment is tailored to the relevant circumstances. The Tribunal accordingly believes that the adjustment may be made by drawing a geodetic line starting at an azimuth of 215°. A significant shift in the angle of that azimuth would result in cut-off effects on the projections from the coast of one Party or the other. A shift toward the north-west would produce a line that does not adequately remedy the cut-off effect on the southward projection of the coast of Bangladesh, while a shift in the opposite direction would produce a cut-off effect on the seaward projection of Myanmar's coast.

331. The Tribunal, therefore, determines that the adjustment of the provisional equidistance line should commence at point X with coordinates 20° 03' 32.0" N, 91° 50' 31.8" E, where the equidistance line begins to cut off the southward projection of the coast of Bangladesh. The Tribunal has selected the point on the provisional equidistance line that is due south of the point on Kutubdia Island at which the direction of the coast of Bangladesh shifts, markedly from north-west to west, as indicated by the lines drawn by the Tribunal to identify the relevant coasts of Bangladesh.
effects it produces in relation to those coasts are confirmed by the fact that it intersects the 200 nm limit of the exclusive economic zone of Myanmar at a point that is nearly equidistant from Cape Negrais on Myanmar’s coast and the terminus of Bangladesh’s land boundary with India.

Delimitation line

337. The delimitation line for the exclusive economic zone and the continental shelf of the Parties within 200 nm begins at point 9 with coordinates 20° 26' 39.2" N, 92° 9' 50.7" E, the point at which the envelope of arcs of the 12 nm limit of Bangladesh’s territorial sea around St. Martin’s Island intersects with the equidistance line referred to in paragraphs 271-274.

338. From point 9, the delimitation line follows a geodetic line until point 10(T1) with coordinates 20° 13' 06.3" N, 92° 00' 07.6" E.

339. From point 10(T1), the delimitation line follows a geodetic line until point 11(X) with coordinates 20° 03' 32.0" N, 91° 50' 31.8" E, at which the adjustment of the line begins to take effect as determined by the Tribunal in paragraph 331.

340. From point 11(X), the delimitation line continues as a geodetic line starting at an azimuth of 215° until it reaches a point which is located 200 nm from the baselines from which the breadth of the territorial sea of Bangladesh is measured.
IX. Continental shelf beyond 200 nautical miles

Jurisdiction to delimit the continental shelf in its entirety

341. While the Parties are in agreement that the Tribunal is requested to delimit the continental shelf between them in the Bay of Bengal within 200 nm, they disagree as to whether the Tribunal has jurisdiction to delimit the continental shelf beyond 200 nm and whether the Tribunal, if it determines that it has jurisdiction to do so, should exercise such jurisdiction.

342. As pointed out in paragraph 45, Myanmar does not dispute that “as a matter of principle, the delimitation of the continental shelf, including the shelf beyond 200 [nm], could fall within the jurisdiction of the Tribunal”. However, it raises the issue of the advisability in the present case of the exercise by the Tribunal of its jurisdiction with respect to the delimitation of the continental shelf beyond 200 nm.

343. Myanmar states in its Counter Memorial that the question of the jurisdiction of the Tribunal regarding the delimitation of the continental shelf beyond 200 nm in general should not arise in the present case because the delimitation line, in its view, terminates well before reaching the 200 nm limit from the baselines from which the territorial sea is measured.

344. At the same time Myanmar submits that “[e]ven if the Tribunal were to decide that there could be a single maritime boundary beyond 200 [nm] (quod non), the Tribunal would still not have jurisdiction to determine this line because any judicial pronouncement on these issues might prejudice the rights of third parties and also those relating to the international seabed area”.

345. Myanmar further submits that “[a]s long as the outer limit of the continental shelf has not been established on the basis of the recommendations of the Commission on the Limits of the Continental Shelf (hereinafter “the Commission”), “the Tribunal, as a court of law, cannot determine the line of delimitation on a hypothetical basis without knowing what the outer limits are”. It argues in this regard that:

A review of a State’s submission and the making of recommendations by the Commission on this submission is a necessary prerequisite for any determination of the outer limits of the continental shelf of a coastal State ‘on the basis of these recommendations’ under article 76 (8) of UNCLOS and the area of continental shelf beyond 200 [nm] to which a State is potentially entitled; this, in turn, is a necessary precondition to any judicial determination of the division of areas of overlapping sovereign rights to the natural resources of the continental shelf beyond 200 [nm]. […] To reverse the process […] to adjudicate with respect to rights the extent of which is unknown, would not only put this Tribunal at odds with other treaty bodies, but with the entire structure of the Convention and the system of international ocean governance.

346. In support of its position, Myanmar refers to the Arbitral Award in the Case concerning the Delimitation of Maritime Areas between Canada and France of 10 June 1992, which states: “[i]t is not possible for a tribunal to reach a decision by assuming hypothetically the eventuality that such rights will in fact exist” (Decision of 10 June 1992, ILM, Vol. 31 (1992), p. 1145, at p. 1172, para. 81).

347. Myanmar asserts that in the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras), the ICJ declined to delimit the continental shelf beyond 200 nm between Nicaragua and Honduras because the Commission had not yet made recommendations to the two countries regarding the continental shelf beyond 200 nm.

348. During the oral proceedings Myanmar clarified its position, stating, inter alia, that in principle it did not question the jurisdiction of the Tribunal. The Parties accepted the Tribunal’s jurisdiction on the same terms, in accordance with the provisions of article 287, paragraph 1, of the Convention, “for the settlement of dispute […] relating to the delimitation of maritime boundary between the two countries in the Bay of Bengal”. According to Myanmar, the only problem that arose concerned the possibility that the Tribunal might in
this matter exercise this jurisdiction and decide on the delimitation of the continental shelf beyond 200 nm.

349. Myanmar further observed that if the Tribunal "nevertheless were to consider the Application admissible on this point – quod non – you could not but defer judgment on this aspect of the matter until the Parties, in accordance with Article 76 of the Convention, have taken a position on the recommendations of the Commission concerning the existence of entitlements of the two Parties to the continental shelf beyond 200 [nm] and, if such entitlements exist, on their seaward extension – i.e., on the outer (not lateral, outer) limits of the continental shelf of the two countries”.

350. Bangladesh is of the view that the Tribunal is expressly empowered by the Convention to adjudicate disputes between States arising under articles 76 and 83, in regard to the delimitation of the continental shelf. As the Convention draws no distinction in this regard between jurisdiction over the inner part of the continental shelf, i.e., that part within 200 nm, and the part beyond that distance, according to Bangladesh, delimitation of the entire continental shelf is covered by article 83, and the Tribunal plainly has jurisdiction to carry out delimitation beyond 200 nm.

351. Responding to Myanmar’s argument that "in any event, the question of delimiting the shelf beyond 200 [nm] does not arise because the delimitation line terminates well before reaching the 200 [nm] limit”, Bangladesh states that “Myanmar’s argument that Bangladesh has no continental shelf beyond 200 [nm] is based instead on the proposition that once the area within 200 [nm] is delimited, the terminus of Bangladesh’s shelf falls short of the 200 [nm] limit”. Bangladesh contends that “[t]his can only be a valid argument if the Tribunal first accepts Myanmar’s arguments in favour of an equidistance line within 200 [nm]. Such an outcome would require the Tribunal to disregard entirely the relevant circumstances relied upon by Bangladesh”.

352. With reference to Myanmar’s argument regarding the rights of third parties, Bangladesh states that a potential overlapping claim of a third State cannot deprive the Tribunal of jurisdiction to delimit the maritime boundary between two States that are subject to the jurisdiction of the Tribunal, because third States are not bound by the Tribunal’s judgment and their rights are unaffected by it. Bangladesh points out that so far as third States are concerned, a delimitation judgment by the Tribunal is merely res inter alios acta and that this assurance is provided in article 33, paragraph 2, of the Statute.

353. Bangladesh also observes that Myanmar’s contention “with regard to the international seabed area disregards its own submission to the CLCS, which makes clear that the outer limits of the continental shelf vis-à-vis the international seabed are far removed from the maritime boundary with Bangladesh”.

354. Bangladesh observes that with respect to the potential areas of overlap with India, Myanmar accepts that even if the Tribunal cannot fix a tripoint between three States, it can indicate the “general direction for the final part of the maritime boundary between Myanmar and Bangladesh”, and that doing so would be “in accordance with the well-established practise” of international courts and tribunals.

355. In summarizing its position on the issue of the rights of third parties and the jurisdiction of the Tribunal, Bangladesh states that:

1. […]

2. The delimitation by the Tribunal of a maritime boundary in the continental shelf beyond 200 [nm] does not prejudice the rights of third parties. In the same way that international courts and tribunals have consistently exercised jurisdiction where the rights of third States are involved, ITLOS may exercise jurisdiction, even if the rights of the international community to the international seabed were involved, which in this case they are not.

3. With respect to the area of shelf where the claims of Bangladesh and Myanmar overlap with those of India, the Tribunal need only determine which of the two Parties in the present proceeding has the better claim, and effect a delimitation that is only binding on Bangladesh and Myanmar. Such a delimitation as
between the two Parties to this proceeding would not be binding on India.

356. Bangladesh observes that there is no conflict between the roles of the Tribunal and the Commission in regard to the continental shelf and that, to the contrary, the roles are complementary. Bangladesh also states that the Tribunal has jurisdiction to delimit boundaries within the outer continental shelf and that the Commission makes recommendations as to the delineation of the outer limits of the continental shelf with the Area, as defined in article 1, paragraph 1, of the Convention, provided there are no disputed claims between States with opposite or adjacent coasts.

357. Bangladesh adds that the Commission may not make any recommendations on the outer limits until any such dispute is resolved by the Tribunal or another judicial or arbitral body or by agreement between the parties, unless the parties give their consent that the Commission review their submissions. According to Bangladesh, in the present case, “the Commission is precluded from acting due to the Parties’ disputed claims in the outer continental shelf and the refusal by at least one of them (Bangladesh) to consent to the Commission’s actions”.

358. Bangladesh points out that if Myanmar’s argument were accepted, the Tribunal would have to wait for the Commission to act and the Commission would have to wait for the Tribunal to act. According to Bangladesh, the result would be that, whenever parties are in dispute in regard to the continental shelf beyond 200 nm, the compulsary procedures entailing binding decisions under Part XV, Section 2, of the Convention would have no practical application. Bangladesh adds that “[i]n effect, the very object and purpose of the UNCLOS dispute settlement procedures would be negated. Myanmar’s position opens a jurisdictional black hole into which all disputes concerning maritime boundaries in the outer continental shelf would forever disappear”.

359. Summarizing its position, Bangladesh states that in portraying recommendations by the Commission as a prerequisite to the exercise of jurisdiction by the Tribunal, Myanmar sets forth a “circular argument” that would make the exercise by the Tribunal of its jurisdiction with respect to the continental shelf beyond 200 nm impossible, which is inconsistent with Part XV and with article 76, paragraph 10, of the Convention.

360. The Tribunal will now consider whether it has jurisdiction to delimit the continental shelf beyond 200 nm.

361. Article 76 of the Convention embodies the concept of a single continental shelf. In accordance with article 77, paragraphs 1 and 2, of the Convention, the coastal State exercises exclusive sovereign rights over the continental shelf in its entirety without any distinction being made between the shelf within 200 nm and the shelf beyond that limit. Article 83 of the Convention, concerning the delimitation of the continental shelf between States with opposite or adjacent coasts, likewise does not make any such distinction.

362. In this regard, the Tribunal notes that in the Arbitration between Barbados and Trinidad and Tobago, the Arbitral Tribunal decided that “the dispute to be dealt with by the Tribunal includes the outer continental shelf, since […] it either forms part of, or is sufficiently closely related to, the dispute […] and […] in any event there is in law only a single ‘continental shelf’ rather than an inner continental shelf and a separate extended or outer continental shelf” (Decision of 11 April 2006, RIAA, Vol. XXVII, p. 147, at pp. 208-209, para. 213).

363. For the foregoing reasons, the Tribunal finds that it has jurisdiction to delimit the continental shelf in its entirety. The Tribunal will now consider whether, in the circumstances of this case, it is appropriate to exercise that jurisdiction.
Exercise of jurisdiction

364. The Tribunal will first address Myanmar’s argument that Bangladesh’s continental shelf cannot extend beyond 200 nm because the maritime area in which Bangladesh enjoys sovereign rights with respect to natural resources of the continental shelf does not extend up to 200 nm.

365. The Tribunal notes that this argument cannot be sustained, given its decision, as set out in paragraph 339, that the delimitation line of the exclusive economic zone and the continental shelf reaches the 200 nm limit.

366. The Tribunal will now turn to the question of whether the exercise of its jurisdiction could prejudice the rights of third parties.

367. The Tribunal observes that, as provided for in article 33, paragraph 2, of the Statute, its decision “shall have no binding force except between the parties in respect of that particular dispute”. Accordingly, the delimitation of the continental shelf by the Tribunal cannot prejudice the rights of third parties. Moreover, it is established practice that the direction of the seaward segment of a maritime boundary may be determined without indicating its precise terminus, for example by specifying that it continues until it reaches the area where the rights of third parties may be affected.

368. In addition, as far as the Area is concerned, the Tribunal wishes to observe that, as is evident from the Parties’ submissions to the Commission, the continental shelf beyond 200 nm that is the subject of delimitation in the present case is situated far from the Area. Accordingly, the Tribunal, by drawing a line of delimitation, will not prejudice the rights of the international community.

369. The Tribunal will now examine the issue of whether it should refrain in the present case from exercising its jurisdiction to delimit the continental shelf beyond 200 nm until such time as the outer limits of the continental shelf have been established by each Party pursuant to article 76, paragraph 8, of the Convention or at least until such time as the Commission has made recommendations to each Party on its submission and each Party has had the opportunity to consider its reaction to the recommendations.

370. The Tribunal wishes to point out that the absence of established outer limits of a maritime zone does not preclude delimitation of that zone. Lack of agreement on baselines has not been considered an impediment to the delimitation of the territorial sea or the exclusive economic zone notwithstanding the fact that disputes regarding baselines affect the precise seaward limits of these maritime areas. However, in such cases the question of the entitlement to maritime areas of the parties concerned did not arise.

371. The Tribunal must therefore consider whether it is appropriate to proceed with the delimitation of the continental shelf beyond 200 nm given the role of the Commission as provided for in article 76, paragraph 8, of the Convention and article 3, paragraph 1, of Annex II to the Convention.

372. Pursuant to article 31 of the Vienna Convention, the Convention is to be interpreted in good faith in accordance with the ordinary meaning of its terms in their context and in the light of its object and purpose. As stated in the Advisory Opinion of the Seabed Disputes Chamber, article 31 of the Vienna Convention is to be considered “as reflecting customary international law” (Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area (Request for Advisory Opinion submitted to the Seabed Disputes Chamber), 1 February 2011, para. 57).

373. The Convention sets up an institutional framework with a number of bodies to implement its provisions, including the Commission, the International Seabed Authority and this Tribunal. Activities of these bodies are complementary to each other so as to ensure coherent and efficient implementation of the Convention. The same is true of other bodies referred to in the Convention.
The right of the coastal State under article 76, paragraph 8, of the Convention to establish final and binding limits of its continental shelf is a key element in the structure set out in that article. In order to realize this right, the coastal State, pursuant to article 76, paragraph 8, is required to submit information on the limits of its continental shelf beyond 200 nm to the Commission, whose mandate is to make recommendations to the coastal State on matters related to the establishment of the outer limits of its continental shelf. The Convention stipulates in article 76, paragraph 8, that the "limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding".

Thus, the Commission plays an important role under the Convention and has a special expertise which is reflected in its composition. Article 2 of Annex II to the Convention provides that the Commission shall be composed of experts in the field of geology, geophysics or hydrography. Article 3 of Annex II to the Convention stipulates that the functions of the Commission are, inter alia, to consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nm and to make recommendations in accordance with article 76 of the Convention.

There is a clear distinction between the delimitation of the continental shelf under article 83 and the delineation of its outer limits under article 76. Under the latter article, the Commission is assigned the function of making recommendations to coastal States on matters relating to the establishment of the outer limits of the continental shelf, but it does so without prejudice to delimitation of maritime boundaries. The function of settling disputes with respect to delimitation of maritime boundaries is entrusted to dispute settlement procedures under article 83 and Part XV of the Convention, which include international courts and tribunals.

There is nothing in the Convention or in the Rules of Procedure of the Commission or in its practice to indicate that delimitation of the continental shelf constitutes an impediment to the performance by the Commission of its functions.

Article 76, paragraph 10, of the Convention states that "[t]he provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts". This is further confirmed by article 9 of Annex II, to the Convention, which states that the "actions of the Commission shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts".

Just as the functions of the Commission are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts, so the exercise by international courts and tribunals of their jurisdiction regarding the delimitation of maritime boundaries, including that of the continental shelf, is without prejudice to the exercise by the Commission of its functions on matters related to the delineation of the outer limits of the continental shelf.

Several submissions made to the Commission, beginning with the first submission, have included areas in respect of which there was agreement between the States concerned effecting the delimitation of their continental shelf beyond 200 nm. However, unlike in the present case, in all those situations delimitation has been effected by agreement between States, not through international courts and tribunals.

In this respect, the Tribunal notes the positions taken in decisions by international courts and tribunals.

The Arbitral Tribunal in the Arbitration between Barbados and the Republic of Trinidad and Tobago found that its jurisdiction included the delimitation of the maritime boundary of the continental shelf beyond 200 nm (Decision of 11 April 2006, RIAA, Vol. XXVII, p. 147, at p. 209, para. 217). The Arbitral Tribunal, in that case, did not exercise its jurisdiction stating that:
As will become apparent, however, the single maritime boundary which the Tribunal has determined is such that, as between Barbados and Trinidad and Tobago, there is no single maritime boundary beyond 200 nm. (ibid., at p. 242, para. 368)

383. In the case concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras), the ICJ declared that:

The Court may accordingly, without specifying a precise endpoint, delimit the maritime boundary and state that it extends beyond the 82nd meridian without affecting third-States rights. It should also be noted in this regard that in no case may the line be interpreted as extending more than 200 [nm] from the baselines from which the breadth of the territorial sea is measured; any claim of continental shelf rights beyond 200 miles must be in accordance with Article 76 of UNCLOS and reviewed by the Commission on the Limits of the Continental Shelf established thereunder. (Judgment, I.C.J. Reports 2007, p. 659, at p. 759, para. 319).

384. The Tribunal observes that the determination of whether an international court or tribunal should exercise its jurisdiction depends on the procedural and substantive circumstances of each case.

385. Pursuant to rule 46 of the Rules of Procedure of the Commission, in the event that there is a dispute in the delimitation of the continental shelf between States with opposite or adjacent coasts, submissions to the Commission shall be considered in accordance with Annex I to those Rules. Annex I, paragraph 2, provides:

In case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States, or in other cases of unresolved land or maritime disputes, related to the submission, the Commission shall be:

(a) Informed of such disputes by the coastal States making the submission; and

(b) Assured by the coastal States making the submission to the extent possible that the submission will not prejudice matters relating to the delimitation of boundaries between States.

386. Paragraph 5 (a) of Annex I to the same Rules further provides:

5. (a) In cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the States concerned in the dispute. However, the Commission may consider one or more submissions in the areas under dispute with prior consent given by all States that are parties to such a dispute.

387. In the present case, Bangladesh informed the Commission by a note verbale dated 23 July 2009, addressed to the Secretary-General of the United Nations, that, for the purposes of rule 46 of the Rules of Procedure of the Commission, and of Annex I thereto, there was a dispute between the Parties and, recalling paragraph 5 (a) of Annex I to the Rules, observed that:

given the presence of a dispute between Bangladesh and Myanmar concerning entitlement to the parts of the continental shelf in the Bay of Bengal claimed by Myanmar in its submission, the Commission may not “consider and qualify” the submission made by Myanmar without the “prior consent given by all States that are parties to such a dispute”.

388. Taking into account Bangladesh’s position, the Commission has deferred consideration of the submission made by Myanmar (Statement by the Chairman of the Commission on the progress of work in the Commission, CLCS/64 of 1 October 2009, p. 10, paragraph 40)

389. The Commission also decided to defer the consideration of the submission of Bangladesh,

in order to take into account any further developments that might occur in the intervening period, during which the States concerned might wish to take advantage of the avenues available to them, including provisional arrangements of a practical nature as outlined in annex I to the rules of procedure. (Statement by the Chairman of the Commission on the progress of work in the Commission, CLCS/72 of 16 September 2011, p. 7, paragraph 22)

390. The consequence of these decisions of the Commission is that, if the Tribunal declines to delimit the continental shelf beyond 200 nm under article 83 of the Convention, the issue concerning the establishment of the outer limits of the continental shelf of each of the Parties under article 76 of the Convention may remain unresolved. The Tribunal notes that the record in
this case affords little basis for assuming that the Parties could readily agree on other avenues available to them so long as their delimitation dispute is not settled.

391. A decision by the Tribunal not to exercise its jurisdiction over the dispute relating to the continental shelf beyond 200 nm would not only fail to resolve a long-standing dispute, but also would not be conducive to the efficient operation of the Convention.

392. In the view of the Tribunal, it would be contrary to the object and purpose of the Convention not to resolve the existing impasse. Inaction in the present case, by the Commission and the Tribunal, two organs created by the Convention to ensure the effective implementation of its provisions, would leave the Parties in a position where they may be unable to benefit fully from their rights over the continental shelf.

393. The Tribunal observes that the exercise of its jurisdiction in the present case cannot be seen as an encroachment on the functions of the Commission, inasmuch as the settlement, through negotiations, of disputes between States regarding delimitation of the continental shelf beyond 200 nm is not seen as precluding examination by the Commission of the submissions made to it or hindering it from issuing appropriate recommendations.

394. For the foregoing reasons, the Tribunal concludes that, in order to fulfill its responsibilities under Part XV, Section 2, of the Convention in the present case, it has an obligation to adjudicate the dispute and to delimit the continental shelf between the Parties beyond 200 nm. Such delimitation is without prejudice to the establishment of the outer limits of the continental shelf in accordance with article 76, paragraph 8, of the Convention.

Entitlement

395. The delimitation of the continental shelf beyond 200 nm in this case entails the interpretation and application of both article 76 and article 83 of the Convention.

396. Article 83 is set forth in paragraph 182 and article 76 reads as follows:

Definition of the continental shelf

1. The continental shelf of a coastal State 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 [nm] 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.

2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.

4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 [nm] from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 [nm] from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.

5. The fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4 (a)(i) and (ii), either shall not exceed 350 [nm] from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 [nm] from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.
6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 [nm] from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

7. The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 [nm] from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 [nm] in length, connecting fixed points, defined by coordinates of latitude and longitude.

8. Information on the limits of the continental shelf beyond 200 [nm] from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.

10. The provisions of this Article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.

Entitlement and delimitation

397. Delimitation presupposes an area of overlapping entitlements. Therefore, the first step in any delimitation is to determine whether there are entitlements and whether they overlap.

398. While entitlement and delimitation are two distinct concepts addressed respectively in articles 76 and 83 of the Convention, they are interrelated. The Parties also recognize the interrelationship between entitlement and delimitation. Bangladesh states that “[t]he Tribunal must answer this question before it can delimit the shelf: does either Party have an entitlement to a continental shelf beyond 200 [nm]?” Likewise, Myanmar observes that “the determination of the entitlements of both States to a continental shelf beyond 200 [nm] and their respective extent is a prerequisite for any delimitation”.

399. Thus the question the Tribunal should first address in the present case is whether the Parties have overlapping entitlements to the continental shelf beyond 200 nm. If not, it would be dealing with a hypothetical question.

400. In the present case, the Parties have made claims to the continental shelf beyond 200 nm which overlap. Part of this area is also claimed by India. Each Party denies the other’s entitlement to the continental shelf beyond 200 nm. Furthermore, Myanmar argues that the Tribunal cannot address the issue of the entitlement of either Bangladesh or Myanmar to a continental shelf beyond 200 nm, as this is an issue that lies solely within the competence of the Commission, not of the Tribunal.

401. Considering the above positions of the Parties, the Tribunal will address the main point disputed by them, namely whether or not they have any entitlement to the continental shelf beyond 200 nm. In this regard, the Tribunal will first address the question of whether it can and should in this case determine the entitlements of the Parties to the continental shelf beyond 200 nm. The Tribunal will next consider the positions of the Parties regarding entitlements. It will then analyze the meaning of natural prolongation and its interrelation with that of continental margin. Finally, the Tribunal will determine whether the Parties have entitlements to the continental shelf beyond 200 nm and whether those entitlements overlap. On the basis of these determinations, the Tribunal will take a decision on the delimitation of the continental shelf of the Parties beyond 200 nm.

402. The Tribunal will now address the first question, namely, whether it can and should in the present case determine the entitlements of the Parties to the continental shelf beyond 200 nm.

403. Bangladesh argues that the Tribunal is required to decide on the question of entitlements of the Parties to the continental shelf beyond 200 nm. For Bangladesh, “the 1982 Convention requires that ITLOS delimit the areas of outer continental shelf claimed by both Bangladesh and Myanmar by
deciding that only Bangladesh, and not Myanmar, has an entitlement to these areas, and by fixing the maritime boundary separating the continental shelves of the two Parties along the line that is exactly 200 [nm] from Myanmar’s coastline”.

404. Bangladesh further contends that “[i]nsofar as its entitlement to this area of continental shelf overlaps with the claims of Myanmar, it is for ITLOS to determine the validity of the competing claims and delimit an equitable boundary taking into account the applicable law, and relevant scientific and factual circumstances. These include Bangladesh’s ‘natural prolongation’ throughout the Bay of Bengal and the absence of any natural prolongation on Myanmar’s side”.

405. Myanmar argues that “[t]he Tribunal has no need to and cannot deal with the issue of the entitlement of Bangladesh or of Myanmar to a continental shelf extending beyond 200 [nm]”. In the view of Myanmar, “the determination of the entitlements of both States to a continental shelf beyond 200 [nm] and their respective extent is a prerequisite for any delimitation, and the Commission on the Limits of the Continental Shelf (CLCS) plays a crucial role in this regard”.

406. Regarding the question whether it can and should decide on the entitlements of the Parties, the Tribunal first points out the need to make a distinction between the notion of entitlement to the continental shelf beyond 200 nm and that of the outer limits of the continental shelf.

407. It is clear from article 76, paragraph 8, of the Convention that the limits of the continental shelf beyond 200 nm can be established only by the coastal State. Although this is a unilateral act, the opposability with regard to other States of the limits thus established depends upon satisfaction of the requirements specified in article 76, in particular compliance by the coastal State with the obligation to submit to the Commission information on the limits of the continental shelf beyond 200 nm and issuance by the Commission of relevant recommendations in this regard. It is only after the limits are established by the coastal State on the basis of the recommendations of the Commission that these limits become “final and binding”.

408. The foregoing does not imply that entitlement to the continental shelf depends on any procedural requirements. As stated in article 77, paragraph 3, of the Convention, “[t]he rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation”.

409. A coastal State’s entitlement to the continental shelf exists by the sole fact that the basis of entitlement, namely, sovereignty over the land territory, is present. It does not require the establishment of outer limits. Article 77, paragraph 3, of the Convention, confirms that the existence of entitlement does not depend on the establishment of the outer limits of the continental shelf by the coastal State.

410. Therefore, the fact that the outer limits of the continental shelf beyond 200 nm have not been established does not imply that the Tribunal must refrain from determining the existence of entitlement to the continental shelf and delimiting the continental shelf between the parties concerned.

411. The Tribunal’s consideration of whether it is appropriate to interpret article 76 of the Convention requires careful examination of the nature of the questions posed in this case and the functions of the Commission established by that article. It takes note in this regard that, as this article contains elements of law and science, its proper interpretation and application requires both legal and scientific expertise. While the Commission is a scientific and technical body with recommendatory functions entrusted by the Convention to consider scientific and technical issues arising in the implementation of article 76 on the basis of submissions by coastal States, the Tribunal can interpret and apply the provisions of the Convention, including article 76. This
may include dealing with uncontested scientific materials or require recourse to experts.

412. In the present case, the Parties do not differ on the scientific aspects of the seabed and subsoil of the Bay of Bengal. Rather, they differ on the interpretation of article 76 of the Convention, in particular the meaning of "natural prolongation" in paragraph 1 of that article and the relationship between that paragraph and paragraph 4 concerning the establishment by the coastal State of the outer edge of the continental margin. While the Parties agree on the geological and geomorphologic data, they disagree about their legal significance in the present case.

413. As the question of the Parties' entitlement to a continental shelf beyond 200 nm raises issues that are predominantly legal in nature, the Tribunal can and should determine entitlements of the Parties in this particular case.

414. While both Parties make claims to the continental shelf beyond 200 nm, each disputes the other's claim. Thus, according to them, there are no overlapping claims over the continental shelf beyond 200 nm. Each Party argues that it alone is entitled to the entire area of the continental shelf beyond 200 nm.

415. Bangladesh submits that pursuant to article 76 of the Convention, it has an entitlement to the continental shelf beyond 200 nm. It further submits that Myanmar enjoys no such entitlement because its land territory has no natural prolongation into the Bay of Bengal beyond 200 nm. Therefore, according to Bangladesh, there is no overlapping continental shelf beyond 200 nm between the Parties, and it alone is entitled to the continental shelf claimed by both of them. Bangladesh thus submits that any boundary in this area must lie no further seaward from Myanmar's coast than the 200 nm "juridical shelf" provided for in article 76.

416. In respect of its own entitlement to the continental shelf beyond 200 nm, Bangladesh asserts that "the outer continental shelf claimed by Bangladesh is the natural prolongation of Bangladesh's land territory by virtue of the uninterrupted seabed geology and geomorphology, including specifically the extensive sedimentary rock deposited by the Ganges-Brahmaputra river system". To prove this, Bangladesh provided the Tribunal with scientific evidence to show that there is a geological and geomorphological continuity between the Bangladesh land mass and the seabed and subsoil of the Bay of Bengal. In addition, Bangladesh submits that the extent of its entitlement to the continental shelf beyond 200 nm, established by the so-called Gardiner formula based on sediment thickness, extends well beyond 200 nm.

417. Bangladesh argues that Myanmar is not entitled to a continental shelf beyond 200 nm because it cannot meet the physical test of natural prolongation in article 76, paragraph 1, which requires evidence of a geological character connecting the seabed and subsoil directly to the land territory. According to Bangladesh, there is overwhelming and unchallenged evidence of a "fundamental discontinuity" between the landmass of Myanmar and the seabed beyond 200 nm. Bangladesh contends that the tectonic plate boundary between the Indian and Burma Plates is manifestly "a marked disruption or discontinuance of the seabed" that serves as "an indisputable indication of the limits of two separate continental shelves, or two separate natural prolongations".

418. In its note verbale of 23 July 2009 to the Secretary-General of the United Nations, Bangladesh observed that "the areas claimed by Myanmar in its submission to the Commission as part of its putative continental shelf are the natural prolongation of Bangladesh and hence Myanmar's claim is disputed by Bangladesh". In its submission of 25 February 2011 to the Commission, Bangladesh reiterated this position by stating that it "disputes the claim by Myanmar to areas of outer continental shelf" because those claimed areas "form part of the natural prolongation of Bangladesh."
419. In summing up, Bangladesh states:

That by reason of the significant geological discontinuity which divides the Burma plate from the Indian plate, Myanmar is not entitled to a continental shelf in any of the areas beyond 200 [nm].
That Bangladesh is entitled to claim sovereign rights over all of the bilateral shelf area beyond 200 [nm] claimed by Bangladesh and Myanmar [...].
That, vis-à-vis Myanmar only, Bangladesh is entitled to claim sovereign rights over the trilateral shelf area claimed by Bangladesh, Myanmar and India [...].

420. Myanmar rejects Bangladesh’s contention that Myanmar has no entitlement to a continental shelf beyond 200 nm. While Myanmar does not contradict Bangladesh’s evidence from a scientific point of view, it emphasizes that the existence of a geological discontinuity in front of the coast of Myanmar is simply irrelevant to the case. According to Myanmar, the entitlement of a coastal State to a continental shelf beyond 200 nm is not dependent on any “test of natural geological prolongation”. What determines such entitlement is the physical extent of the continental margin, that is to say its outer edge, to be identified in accordance with article 76, paragraph 4, of the Convention.

421. Myanmar points out that it identified the outer edge of its continental margin by reference to the Gardiner formula, which is embodied in article 76, paragraph 4(a)(i), of the Convention. The Gardiner line thus identified is well beyond 200 nm, and, consequently, so is the outer edge of Myanmar’s continental margin. Therefore Myanmar is entitled to a continental shelf beyond 200 nm in the present case. It has accordingly submitted the particulars of the outer limits of its continental shelf to the Commission pursuant to article 76, paragraph 8, of the Convention.

422. In a note verbale dated 31 March 2011 to the Secretary-General of the United Nations, Myanmar stated: “Bangladesh has no continental shelf extending beyond 200 [nm] measured from lawfully established base lines, or, a fortiori, beyond this limit”.

423. Myanmar argues that Bangladesh has no continental shelf beyond 200 nm because “[t]he delimitation of the continental shelf between Myanmar and Bangladesh stops well before reaching the 200-[nm] limit measured from the baselines of both States. In these circumstances, the question of the delimitation of the continental shelf beyond this limit is moot and does not need to be considered further by the Tribunal”.

**Meaning of natural prolongation**

424. With respect to the question of the Parties’ entitlements to the continental shelf beyond 200 nm, Bangladesh has made considerable efforts to describe the geological evolution of the Bay of Bengal and its geophysical characteristics known as the Bengal depositional system. Bangladesh points out in particular that the Indian plate, on which the entire Bengal depositional system is located, slides under the adjacent Burma plate close to and along the coast of Myanmar, thus resulting in the Sunda Subduction Zone. According to Bangladesh, this subduction zone, which marks the collision between the two separate tectonic plates, represents the most fundamental geological discontinuity in the Bay of Bengal.

425. Myanmar does not dispute Bangladesh’s description of the area in question and the scientific evidence presented to support it. What Myanmar does contest, however, is the relevance of these facts and evidence to the present case. The disagreement between the Parties in this regard essentially relates to the question of the interpretation of article 76 of the Convention, in particular the meaning of “natural prolongation” in paragraph 1 of that article.

426. Bangladesh argues that “natural prolongation of its land territory” in article 76, paragraph 1, refers to the need for geological as well as geomorphological continuity between the land mass of the coastal State and the seabed beyond 200 nm. Where, as in the case of Myanmar, such
continuity is absent, there cannot be entitlement beyond 200 nm. In Bangladesh’s view, “natural prolongation beyond 200 [nm] is, at root, a physical concept [and] must be established by both geological and geomorphological evidence”. It cannot be based on the geomorphology of the ocean floor alone but must have an appropriate geological foundation. Bangladesh argues that the ordinary meaning of the words “natural prolongation” in their context clearly supports such interpretation. It maintains that this interpretation is also supported by the jurisprudence, as well as the Scientific and Technical Guidelines and the practice of the Commission.

427. Myanmar disputes Bangladesh’s interpretation of natural prolongation. According to Myanmar, “[n]atural prolongation, as referred to in article 76(1) of UNCLOS is not, and cannot be made to be, a new and independent criterion or test of entitlement to continental shelf” beyond 200 nm. In Myanmar’s view, natural prolongation is a legal term employed in the specific context of defining the continental shelf and carries no scientific connotation. Under article 76, paragraph 1, of the Convention, the controlling concept is not natural prolongation but the “outer edge of the continental margin”, which is precisely defined by the two formulae provided in article 76, paragraph 4. Myanmar is of the view that “article 76 (4) of UNCLOS controls to a large extent the application of article 76 as a whole and is the key to the provision”. Myanmar argues that this interpretation is confirmed by the practice of the Commission as well as the object and purpose of the provision and the legislative history. For this reason, according to Myanmar, such scientific facts as the origin of sediment on the seabed or in the subsoil, the nature of sediment and the basement structure or tectonics underlying the continents are not relevant for determining the extent of entitlement to the continental shelf under article 76.

428. In view of the above disagreement between the Parties over the meaning of “natural prolongation”, the Tribunal has to consider how the term, as used in article 76, paragraph 1, of the Convention, is to be interpreted.

Article 76 defines the continental shelf. In particular, paragraph 1 thereof defines the extent of the continental shelf, and subsequent paragraphs elaborate upon that. Paragraph 1 reads as follows:

1. The continental shelf of a coastal State 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 [nm] 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.

429. Under article 76, paragraph 1, of the Convention, the continental shelf of a coastal State can extend either to the outer edge of the continental margin or to a distance of 200 nm, depending on where the outer edge is situated. While the term “natural prolongation” is mentioned in this paragraph, it is clear from its language that the notion of “the outer edge of the continental margin” is an essential element in determining the extent of the continental shelf.

430. Paragraphs 3 and 4 of article 76 of the Convention, further elaborate the notion of the outer edge of the continental margin. In particular, paragraph 4 of that article introduces specific formulae to enable the coastal State to establish precisely the outer edge of the continental margin. It reads as follows:

4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 [nm] from the baselines from which the breadth of the territorial sea is measured, by either:
(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or
(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 [nm] from the foot of the continental slope.
(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.
431. By applying article 76, paragraph 4, of the Convention, which requires scientific and technical expertise, a coastal State will be able to identify the precise location of the outer edge of the continental margin.

432. By contrast, no elaboration of the notion of natural prolongation referred to in article 76, paragraph 1, is to be found in the subsequent paragraphs. In this respect, the Tribunal recalls that, while the reference to natural prolongation was first introduced as a fundamental notion underpinning the regime of the continental shelf in the *North Sea* cases, it has never been defined.

433. The Tribunal further observes that during the Third United Nations Conference on the Law of the Sea the notion of natural prolongation was employed as a concept to lend support to the trend towards expanding national jurisdiction over the continental margin.

434. Thus the notion of natural prolongation and that of continental margin under article 76, paragraphs 1 and 4, are closely interrelated. They refer to the same area.

435. Furthermore, one of the principal objects and purposes of article 76 of the Convention is to define the precise outer limits of the continental shelf, beyond which lies the Area. The Tribunal therefore finds it difficult to accept that natural prolongation referred to in article 76, paragraph 1, constitutes a separate and independent criterion a coastal State must satisfy in order to be entitled to a continental shelf beyond 200 nm.

436. Under Annex II to the Convention, the Commission has been established, *inter alia*, to consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf and to make recommendations in accordance with article 76 of the Convention. The Commission has adopted its Scientific and Technical Guidelines on the Limits of the Continental Shelf to assist coastal States in establishing the outer limits of their continental shelf pursuant to that article. The Tribunal takes note of the "test of appurtenance" applied by the Commission on the basis of article 76, paragraph 4, to determine the existence of entitlement beyond 200 nm. These Guidelines provide:

2.2.6 The Commission shall use at all times: the provisions contained in paragraph 4 (a) (i) and (ii), defined as the formulae lines, and paragraph 4 (b), to determine whether a coastal State is entitled to delineate the outer limits of the continental shelf beyond 200 [nm]. The Commission shall accept that a State is entitled to use all the other provisions contained in paragraphs 4 to 10 provided that the application of either of the two formulae produces a line beyond 200 [nm].

2.2.8. The formulation of the test of appurtenance can be described as follows: If either the line delineated at a distance of 60 [nm] from the foot of the continental slope, or the line delineated at a distance where the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of slope, or both, extend beyond 200 [nm] from the baselines from which the breadth of the territorial sea is measured, then a coastal State is entitled to delineate the outer limits of the continental shelf as prescribed by the provisions contained in article 76, paragraphs 4 to 10.

437. For these reasons, the Tribunal is of the view that the reference to natural prolongation in article 76, paragraph 1, of the Convention, should be understood in light of the subsequent provisions of the article defining the continental shelf and the continental margin. Entitlement to a continental shelf beyond 200 nm should thus be determined by reference to the outer edge of the continental margin, to be ascertained in accordance with article 76, paragraph 4. To interpret otherwise is warranted neither by the text of article 76 nor by its object and purpose.

438. The Tribunal therefore cannot accept Bangladesh's contention that, by reason of the significant geological discontinuity dividing the Burma plate from the Indian plate, Myanmar is not entitled to a continental shelf beyond 200 nm.
Determination of entitlements

439. Not every coast generates entitlements to a continental shelf extending beyond 200 nm. The Commission in some instances has based its recommendations on the fact that, in its view, an entire area or part of an area included in a coastal State's submission comprises part of the deep ocean floor.

440. In the present case, Myanmar does not deny that the continental shelf of Bangladesh, if not affected by the delimitation within 200 nm, would extend beyond that distance.

441. Bangladesh does not deny that there is a continental margin off Myanmar's coast but argues on the basis of its interpretation of article 76 of the Convention that this margin has no natural prolongation beyond 50 nm off that coast.

442. The Tribunal observes that the problem lies in the Parties' disagreement as to what constitutes the continental margin.

443. Notwithstanding the overlapping areas indicated in the submissions of the Parties to the Commission, the Tribunal would have been hesitant to proceed with the delimitation of the area beyond 200 nm had it concluded that there was significant uncertainty as to the existence of a continental margin in the area in question.

444. In this regard, the Tribunal notes that the Bay of Bengal presents a unique situation, as acknowledged in the course of negotiations at the Third United Nations Conference on the Law of the Sea. As confirmed in the experts' reports presented by Bangladesh during the proceedings, which were not challenged by Myanmar, the sea floor of the Bay of Bengal is covered by a thick layer of sediments some 14 to 22 kilometres deep originating in the Himalayas and the Tibetan Plateau, having accumulated in the Bay of Bengal over several thousands of years (see Joseph R. Curray, “The Bengal Depositional System: The Bengal Basin and the Bay of Bengal”, 23 June 2010; Joseph R. Curray, “Comments on the Myanmar Counter-Memorial, 1 December 2010”, of 8 March 2011; and Hermann Kudrass, “Elements of Geological Continuity and Discontinuity in the Bay of Bengal: From the Coast to the Deep Sea”, of 8 March 2011).

445. The Tribunal notes that as the thick layer of sedimentary rocks covers practically the entire floor of the Bay of Bengal, including areas appertaining to Bangladesh and Myanmar, in their submissions to the Commission, both Parties included data indicating that their entitlement to the continental margin extending beyond 200 nm is based to a great extent on the thickness of sedimentary rocks pursuant to the formula contained in article 76, paragraph 4(a)(i), of the Convention.

446. In view of uncontested scientific evidence regarding the unique nature of the Bay of Bengal and information submitted during the proceedings, the Tribunal is satisfied that there is a continuous and substantial layer of sedimentary rocks extending from Myanmar's coast to the area beyond 200 nm.

447. The Tribunal will now turn its attention to the significance of the origin of sedimentary rocks in the interpretation and application of article 76 of the Convention. The Tribunal observes that the text of article 76 of the Convention does not support the view that the geographic origin of the sedimentary rocks of the continental margin is of relevance to the question of entitlement to the continental shelf or constitutes a controlling criterion for determining whether a State is entitled to a continental shelf.

448. The Tribunal is not convinced by the arguments of Bangladesh that Myanmar has no entitlement to a continental shelf beyond 200 nm. The scientific data and analyses presented in this case, which have not been contested, do not establish that Myanmar's continental shelf is limited to 200 nm under article 76 of the Convention, and instead indicate the opposite.
The Tribunal accordingly concludes that both Bangladesh and Myanmar have entitlements to a continental shelf extending beyond 200 nm. The submissions of Bangladesh and Myanmar to the Commission clearly indicate that their entitlements overlap in the area in dispute in this case.

Delimitation of the continental shelf beyond 200 nautical miles

The Tribunal will now proceed to delimit the continental shelf beyond 200 nm. It will turn first to the question of the applicable law and delimitation method.

In this context, the Tribunal requested the Parties to address the following question: “Without prejudice to the question whether the Tribunal has jurisdiction to delimit the continental shelf beyond 200 [nm], would the Parties expand on their views with respect of the delimitation of the continental shelf beyond 200 [nm]?”

In response, Bangladesh points out that article 83 of the Convention does not distinguish between delimitation of the continental shelf beyond 200 nm and within 200 nm. According to Bangladesh, the objective of delimitation in both cases is to achieve an equitable solution. The merits of any method of delimitation in this context, in Bangladesh’s view, can only be judged on a case-by-case basis.

Myanmar also argues that the rules and methodologies for delimitation beyond 200 nm are the same as those within 200 nm. According to Myanmar, “nothing either in UNCLOS or in customary international law hints at the slightest difference between the rule of delimitation applicable in the […] areas” beyond and within 200 nm.

The Tribunal notes that article 83 of the Convention addresses the delimitation of the continental shelf between States with opposite or adjacent coasts without any limitation as to area. It contains no reference to the limits set forth in article 76, paragraph 1, of the Convention. Article 83 applies equally to the delimitation of the continental shelf both within and beyond 200 nm.

In the view of the Tribunal, the delimitation method to be employed in the present case for the continental shelf beyond 200 nautical miles should not differ from that within 200 nm. Accordingly, the equidistance/relevant circumstances method continues to apply for the delimitation of the continental shelf beyond 200 nm. This method is rooted in the recognition that sovereignty over the land territory is the basis for the sovereign rights and jurisdiction of the coastal State with respect to both the exclusive economic zone and the continental shelf. This should be distinguished from the question of the object and extent of those rights, be it the nature of the areas to which those rights apply or the maximum seaward limits specified in articles 57 and 76 of the Convention. The Tribunal notes in this respect that this method can, and does in this case, permit resolution also beyond 200 nm of the problem of the cut-off effect that can be created by an equidistance line where the coast of one party is markedly concave (see paragraphs 290-291).

The Tribunal will accordingly proceed to re-examine the question of relevant circumstances in this particular context.

Bangladesh contends that the relevant circumstances in the delimitation of the continental shelf beyond 200 nm include the geology and geomorphology of the seabed and subsoil, because entitlement beyond 200 nm depends entirely on natural prolongation while within 200 nm it is based on distance from the coast. According to Bangladesh, its entitlement to the continental shelf beyond 200 nm “rests firmly” on the geological and geomorphological continuity between its land territory and the entire seabed of the Bay of Bengal. Bangladesh states that Myanmar “at best enjoys only geomorphological continuity between its own landmass and the outer continental shelf”. In Bangladesh’s view, therefore, “an equitable delimitation consistent with article 83 must necessarily take full account of the fact that Bangladesh has the most natural prolongation into the Bay of Bengal, and that Myanmar has little or no natural prolongation beyond 200” nm.
Another relevant circumstance indicated by Bangladesh is “the continuing effect of Bangladesh’s concave coast and the cut-off effect generated by Myanmar’s equidistance line, or by any other version of an equidistance line”. According to Bangladesh, “[t]he farther an equidistance or even a modified equidistance line extends from a concave coast, the more it cuts across that coast, continually narrowing the wedge of sea in front of it”.

Given its position that Bangladesh’s continental shelf does not extend beyond 200 nm, Myanmar did not present arguments regarding the existence of relevant circumstances relating to the delimitation of the continental shelf beyond 200 nm. The Tribunal observes that Myanmar stated that there are no relevant circumstances requiring a shift of the provisional equidistance line in the context of the delimitation of the continental shelf within 200 nm.

The Tribunal is of the view that “the most natural prolongation” argument made by Bangladesh has no relevance to the present case. The Tribunal has already determined that natural prolongation is not an independent basis for entitlement and should be interpreted in the context of the subsequent provisions of article 76 of the Convention, in particular paragraph 4 thereof. The Tribunal has determined that both Parties have entitlements to a continental shelf beyond 200 nm in accordance with article 76 and has decided that those entitlements overlap. The Tribunal therefore cannot accept the argument of Bangladesh that, were the Tribunal to decide that Myanmar is entitled to a continental shelf beyond 200 nm, Bangladesh would be entitled to a greater portion of the disputed area because it has “the most natural prolongation”.

Having considered the concavity of the Bangladesh coast to be a relevant circumstance for the purpose of delimiting the exclusive economic zone and the continental shelf within 200 nm, the Tribunal finds that this relevant circumstance has a continuing effect beyond 200 nm.

The Tribunal therefore decides that the adjusted equidistance line delimiting both the exclusive economic zone and the continental shelf within 200 nm between the Parties as referred to in paragraphs 337-340 continues in the same direction beyond the 200 nm limit of Bangladesh until it reaches the area where the rights of third States may be affected.

The delimitation of the continental shelf beyond 200 nm gives rise to an area of limited size located beyond 200 nm from the coast of Bangladesh but within 200 nm from the coast of Myanmar, yet on the Bangladesh side of the delimitation line.

Such an area results when a delimitation line which is not an equidistance line reaches the outer limit of one State’s exclusive economic zone and continues beyond it in the same direction, until it reaches the outer limit of the other State’s exclusive economic zone. In the present case, the area, referred to by the Parties as a “grey area”, occurs where the adjusted equidistance line used for delimitation of the continental shelf goes beyond 200 nm off Bangladesh and continues until it reaches 200 nm off Myanmar.

The Parties differ on the status and treatment of the above-mentioned “grey area”. For Bangladesh, this problem cannot be a reason for adhering to an equidistance line, nor can it be resolved by giving priority to the exclusive economic zone over the continental shelf or by allocating water column rights over that area to Myanmar and continental shelf rights to Bangladesh.

Bangladesh argues that there is no textual basis in the Convention to conclude that one State’s entitlement within 200 nm will inevitably trump another State’s entitlement in the continental shelf beyond 200 nm. Bangladesh finds it impossible to defend a proposition that even a “sliver” of exclusive economic zone of one State beyond the outer limit of another State’s exclusive economic zone puts an end by operation of law to the
entitlement that the latter State would otherwise have to its continental shelf beyond 200 nm under article 76 of the Convention. For Bangladesh, it cannot be the case that:

a State with a clear and undisputable potential entitlement in the continental shelf beyond 200 miles should for ever be prohibited from reaching that entitlement solely by virtue of the geographical happenstance that it is located in a concavity and there is a slight wedge of potential EEZ separating it from the outer continental shelf.

467. As for differentiating water-column rights and continental-shelf rights, in Bangladesh’s view, there is no textual basis in the Convention and such solution could cause great practical inconvenience. According to Bangladesh, “[t]his is why international tribunals have sought at all cost to avoid the problem and why differential attribution of zone and shelf has hardly ever been adopted in State practice”.

468. Myanmar contends that “[a]ny allocation of area to Bangladesh extending beyond 200 [nm] off Bangladesh’s coast, would trump Myanmar’s rights to EEZ and continental shelf within 200 [nm]”. According to Myanmar, “[t]o advance a very hypothetical claim to the continental shelf beyond 200 [nm] against the sovereign rights enjoyed by Myanmar automatically under article 77 of the Convention with respect to its continental shelf within this distance, and against Myanmar’s right to extend its exclusive economic zone” up to this limit, would be contrary to both the Convention and international practice.

469. Myanmar also points out that the Arbitral Tribunal in the Arbitration between Barbados and Trinidad and Tobago ended a maritime boundary at the 200 nm limit of Trinidad and Tobago, thus making clear that Trinidad and Tobago had no access to the continental shelf beyond 200 nm. Therefore, in Myanmar’s view, “the extension of the delimitation beyond 200 [nm] would inevitably infringe on Myanmar’s indisputable rights”. This would then preclude any right of Bangladesh to the continental shelf beyond 200 nm.

470. Myanmar concludes that while the solution submitted by Bangladesh is untenable, the problem of a “grey area” does not arise in the present case, because equitable delimitation does not extend beyond 200 nm.

* * *

471. The Tribunal notes that the boundary delimiting the area beyond 200 nm from Bangladesh but within 200 nm of Myanmar is a boundary delimiting the continental shelves of the Parties, since in this area only their continental shelves overlap. There is no question of delimiting the exclusive economic zones of the Parties as there is no overlap of those zones.

472. The grey area arises as a consequence of delimitation. Any delimitation may give rise to complex legal and practical problems, such as those involving transboundary resources. It is not unusual in such cases for States to enter into agreements or cooperative arrangements to deal with problems resulting from the delimitation.

473. The Tribunal notes that article 56, paragraph 3, of the Convention, provides that the rights of the coastal State with respect to the seabed and subsoil of the exclusive economic zone shall be exercised in accordance with Part VI of the Convention, which includes article 83. The Tribunal further notes that article 68 provides that Part V on the exclusive economic zone does not apply to sedentary species of the continental shelf as defined in article 77 of the Convention.

474. Accordingly, in the area beyond Bangladesh’s exclusive economic zone that is within the limits of Myanmar’s exclusive economic zone, the maritime boundary delimits the Parties’ rights with respect to the seabed and subsoil of the continental shelf but does not otherwise limit Myanmar’s rights with respect to the exclusive economic zone, notably those with respect to the superjacent waters.
475. The Tribunal recalls in this respect that the legal regime of the continental shelf has always coexisted with another legal regime in the same area. Initially that other regime was that of the high seas and the other States concerned were those exercising high seas freedoms. Under the Convention, as a result of maritime delimitation, there may also be concurrent exclusive economic zone rights of another coastal State. In such a situation, pursuant to the principle reflected in the provisions of articles 56, 58, 78 and 79 and in other provisions of the Convention, each coastal State must exercise its rights and perform its duties with due regard to the rights and duties of the other.

476. There are many ways in which the Parties may ensure the discharge of their obligations in this respect, including the conclusion of specific agreements or the establishment of appropriate cooperative arrangements. It is for the Parties to determine the measures that they consider appropriate for this purpose.
X. Disproportionality test

477. Having reached the third stage in the delimitation process as referred to in paragraph 240, the Tribunal will, for this purpose, first determine the relevant area, namely the area of overlapping entitlements of the Parties that is relevant to this delimitation. The Tribunal notes in this regard that mathematical precision is not required in the calculation of either the relevant coasts or the relevant area.

478. Bangladesh maintains that the relevant area includes the maritime space “situated in the coastal fronts [of the two Parties] and extending out to the 200 [nm]”.

479. Bangladesh recalls that its model of the relevant area does not include maritime spaces landward of the Parties’ coastal façades but notes that even if those areas were included they would not make a material difference to the proportionality calculation.

480. In determining the relevant area, Bangladesh excludes the areas claimed by third States. According to Bangladesh, “[i]t cannot be right to credit Bangladesh for maritime spaces that are subject to an active claim by a third State”. Bangladesh cautions that “[t]o include those areas in the proportionality calculations would have a dramatic effect on the numbers that distorts reality”. Bangladesh therefore submits that areas on the “Indian side” of India’s claim are not relevant in the present case.

481. Bangladesh submits that “it is not appropriate to treat as relevant the maritime areas lying off Myanmar’s coast between Bhiff Cape and Cape Negrais. […] It would be incongruous to consider as relevant the maritime spaces adjacent to an irrelevant coast”.

482. According to Bangladesh, the relevant area measures 175,326.8 square kilometres. On the basis of a different calculation of the length of the coasts, Bangladesh also indicated the figure of 252,500 square kilometres.

483. Myanmar asserts that the relevant maritime area is dependent on the relevant coasts and the projections of these coasts, insofar as they overlap. It describes the relevant area as follows:

(i) to the north and to the east, it includes all maritime projections from Bangladesh’s relevant coasts, except the area where Bangladesh coasts face each other (the triangle between the second and the third segments);

(ii) to the east and to the south, it includes all maritime projections from Myanmar’s Rakhine (Arakan) coast, as far as these projections overlap with Bangladesh’s;

(iii) to the west, it extends these maritime projections up to the point they overlap.

484. Myanmar submits that Bangladesh has incorrectly portrayed the relevant area. It asserts that in fact “the relevant area consists of the maritime area generated by the projections of Bangladesh’s relevant coasts and Myanmar’s relevant coast”.

485. Myanmar states that there are two issues in relation to which the Parties are not in agreement. One of these issues concerns the exact extent of the relevant area on the Indian side of India’s claim. The other issue concerns the relevance of the southern part of the coast of Rakhine.

486. Myanmar disagrees with Bangladesh’s contention that the areas on the Indian side of India’s claim are not relevant in the present case. According to Myanmar, Bangladesh, in not including these areas, not only excluded a maritime area of more than 11,000 square kilometres, but also made the delimitation between Bangladesh and Myanmar dependent on the claims of a third State, claims that are – according to Bangladesh – changing and in no way established in law or in fact. For this reason, Myanmar is of the view that these areas should be included in the relevant area up to the equidistance line between the coasts of Bangladesh and India.
487. Concerning the southern part of the coast of Rakhine, Myanmar argues that Bangladesh also fails to take into account the south coast of Myanmar which extending all the way to Cape Negrais. Myanmar submits that “this part of the coast is relevant. Its projection overlaps with the projection of the coast of Bangladesh”.

488. Myanmar submits that the relevant area has a “total surface of 236,539 square kilometres”. During the hearing, however, Myanmar referred to the figure of approximately 214,300 square kilometres.

489. The Tribunal notes that the relevant maritime area for the purpose of the delimitation of the exclusive economic zone and the continental shelf between Bangladesh and Myanmar is that resulting from the projections of the relevant coasts of the Parties.

490. The Tribunal recalls that the Parties disagree on two points insofar as the determination of the relevant maritime area is concerned. First, the Parties disagree as to the inclusion of the southerly maritime area related to the southern part of the coast of Rakhine which extends to Cape Negrais and, second, they also disagree on the exact extent of the relevant area in the north-west section.

491. Regarding the first issue, the Tribunal recalls that it has already found that the segment of Myanmar’s coast that runs from Bhiff Cape to Cape Negrais is to be included in the calculation of the relevant coast. Therefore, the southern maritime area extending to Cape Negrais must be included in the calculation of the relevant area for the purpose of the test of disproportionality. The southern limit of the relevant area will be marked by the parallel westward from Cape Negrais.

492. Turning to the north-west section of the maritime area which falls within the overlapping area, the Tribunal finds that it should be included in the relevant area for the purpose of the test of disproportionality.

493. In this regard, the Tribunal considers that, for the purpose of determining any disproportionality in respect of areas allocated to the Parties, the relevant area should include maritime areas subject to overlapping entitlements of the Parties to the present case.

494. The fact that a third party may claim the same maritime area does not prevent its inclusion in the relevant maritime area for purposes of the disproportionality test. This in no way affects the rights of third parties.

495. For the purposes of the determination of the relevant area, the Tribunal decides that the western limit of the relevant area is marked by a straight line drawn from point ß2 due south.

496. Accordingly, the size of the relevant area has been calculated to be approximately 283,471 square kilometres.

497. The Tribunal will now check whether the adjusted equidistance line has caused a significant disproportion by reference to the ratio of the length of the coastlines of the Parties and the ratio of the relevant maritime area allocated to each Party.

498. The length of the relevant coast of Bangladesh, as indicated in paragraph 202, is 413 kilometres, while that of Myanmar, as indicated in paragraph 204, is 587 kilometres. The ratio of the length of the relevant coasts of the Parties is 1:1.42 in favour of Myanmar.

499. The Tribunal notes that its adjusted delimitation line (see paragraphs 337-340) allocates approximately 111,631 square kilometres of the relevant area to Bangladesh and approximately 171,832 square kilometres to Myanmar. The ratio of the allocated areas is approximately
1:1.54 in favour of Myanmar. The Tribunal finds that this ratio does not lead to any significant disproportion in the allocation of maritime areas to the Parties relative to the respective lengths of their coasts that would require the shifting of the adjusted equidistance line in order to ensure an equitable solution.
XI. Description of the delimitation line

500. All coordinates and azimuths used by the Tribunal in this Judgment are given by reference to WGS 84 as geodetic datum.

501. The delimitation line for the territorial sea between the two Parties is defined by points 1, 2, 3, 4, 5, 6, 7 and 8 with the following coordinates and connected by geodetic lines:

1: 20° 42' 15.8'' N, 92° 22' 07.2'' E;
2: 20° 40' 45.0'' N, 92° 20' 29.0'' E;
3: 20° 39' 51.0'' N, 92° 21' 11.5'' E;
4: 20° 37' 13.5'' N, 92° 23' 42.3'' E;
5: 20° 35' 26.7'' N, 92° 24' 58.5'' E;
6: 20° 33' 17.8'' N, 92° 25' 46.0'' E;
7: 20° 26' 11.3'' N, 92° 24' 52.4'' E;
8: 20° 22' 46.1'' N, 92° 24' 09.1'' E.

502. From point 8 the single maritime boundary follows in a northwesterly direction the 12 nm envelope of arcs of the territorial sea around St Martin’s Island until it intersects at point 9 (with coordinates 20° 26’ 39.2” N, 92° 9’ 50.7” E) with the delimitation line of the exclusive economic zone and the continental shelf between the Parties.

503. From point 9, the single maritime boundary follows a geodetic line until point 10 with coordinates 20° 13’ 06.3” N, 92° 00’ 07.6” E.

504. From point 10, the single maritime boundary follows a geodetic line until point 11 with coordinates 20° 03’ 32.0” N, 91° 50’ 31.8” E.

505. From point 11, the single maritime boundary continues as a geodetic line starting at an azimuth of 215° until it reaches the area where the rights of third States may be affected.
XII. Operative clauses

506. For these reasons,

THE TRIBUNAL,

(1) Unanimously,

Finds that it has jurisdiction to delimit the maritime boundary of the territorial sea, the exclusive economic zone and the continental shelf between the Parties.

(2) By 21 votes to 1,

Finds that its jurisdiction concerning the continental shelf includes the delimitation of the continental shelf beyond 200 nm;

FOR: President JESUS; Vice-President TÜRK; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRASEKHARA RAO, AKL, WOLFRUM, TREVES, COT, LUCKY, PAWLAK, YANAI, KATEKA, HOFFMANN, GAO, BOUGUETAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN;

AGAINST: Judge NDIAYE.

(3) By 20 votes to 2,

Finds that there is no agreement between the Parties within the meaning of article 15 of the Convention concerning the delimitation of the territorial sea;

FOR: President JESUS; Vice-President TÜRK; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRASEKHARA RAO, AKL, WOLFRUM, TREVES, NDIAYE, COT, PAWLAK, YANAI, KATEKA, HOFFMANN, GAO, BOUGUETAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN;

AGAINST: Judges LUCKY, BOUGUETAIA.

(4) By 21 votes to 1,

Decides that starting from point 1, with the coordinates 20° 42' 15.8" N, 92° 22' 07.2" E in WGS 84 as geodetic datum, as agreed by the Parties in 1966, the line of the single maritime boundary shall follow a geodetic line until it reaches point 2 with the coordinates 20° 40' 45.0" N, 92° 20' 29.0" E. From point 2 the single maritime boundary shall follow the median line formed by segments of geodetic lines connecting the points of equidistance between St. Martin's Island and Myanmar through point 8 with the coordinates 20° 22' 46.1" N, 92° 24' 09.1" E. From point 8 the single maritime boundary follows in a northwesterly direction the 12 nm envelope of arcs of the territorial sea around St Martin’s Island until it intersects at point 9 (with the coordinates 20° 26' 39.2" N, 92° 9' 50.7" E) with the delimitation line of the exclusive economic zone and continental shelf between the Parties;

FOR: President JESUS; Vice-President TÜRK; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRASEKHARA RAO, AKL, WOLFRUM, TREVES, NDIAYE, COT, PAWLAK, YANAI, KATEKA, HOFFMANN, GAO, BOUGUETAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN;

AGAINST: Judge LUCKY.

(5) By 21 votes to 1,

Decides that, from point 9 the single maritime boundary follows a geodetic line until point 10 with the coordinates 20° 13' 06.3" N, 92° 00' 07.6" E and then along another geodetic line until point 11 with the coordinates 20° 03' 32.0" N, 91° 50' 31.8" E. From point 11 the single maritime boundary continues as a geodetic line starting at an azimuth of 215° until it reaches the 200 nm limit calculated from the baselines from which the breadth of the territorial sea of Bangladesh is measured;

FOR: President JESUS; Vice-President TÜRK; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRASEKHARA RAO, AKL, WOLFRUM, TREVES, NDIAYE, COT, PAWLAK, YANAI, KATEKA, HOFFMANN, GAO, BOUGUETAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN;
AGAINST: Judge LUCKY.

(6) By 19 votes to 3,

Decides that, beyond that 200 nm limit, the maritime boundary shall continue, along the geodetic line starting from point 11 at an azimuth of 215° as identified in operative paragraph 5, until it reaches the area where the rights of third States may be affected.

FOR: President JESUS; Vice-President TÜRK; Judges MAROTTA RANGEL, YANKOV, NELSON, CHANDRA SEKHARAO, AKL, WOLFRUM, TREVES, COT, PAWLAK, YANAI, KATEKA, HOFFMANN, BOGUETEAIA, GOLITSYN, PAIK; Judges ad hoc MENSAH, OXMAN;

AGAINST: Judges NDIAYE, LUCKY, GAO.

Done in English and in French, both texts being equally authoritative, in the Free and Hanseatic City of Hamburg, this fourteenth day of March, two thousand and twelve, in three copies, one of which will be placed in the archives of the Tribunal and the others transmitted to the Government of the People’s Republic of Bangladesh and the Government of the Republic of the Union of Myanmar, respectively.

(signed) JOSE LUIS JESUS,
President

(signed) PHILIPPE GAUTIER,
Registrar

Judges NELSON, CHANDRA SEKHARAO and COT, availing themselves of the right conferred on them by article 125, paragraph 2, of the Rules of the Tribunal, append their joint declaration to the Judgment of the Tribunal.

(initialled) L.D.M.N.
(initialled) P.C.R.
(initialled) J.-P.C.

Judge WOLFRUM, availing himself of the right conferred on him by article 125, paragraph 2, of the Rules of the Tribunal, appends his declaration to the Judgment of the Tribunal.

(initialled) R.W.

Judge TREVES, availing himself of the right conferred on him by article 125, paragraph 2, of the Rules of the Tribunal, appends his declaration to the Judgment of the Tribunal.

(initialled) T.T.

Judges ad hoc MENSAH and OXMAN, availing themselves of the right conferred on them by article 125, paragraph 2, of the Rules of the Tribunal, append their joint declaration to the Judgment of the Tribunal.

(initialled) T.A.M.
(initialled) B.H.O.

Judge NDIAYE, availing himself of the right conferred on him by article 30, paragraph 3, of the Statute of the Tribunal, appends his separate opinion to the Judgment of the Tribunal.

(initialled) T.M.N.

Judge COT, availing himself of the right conferred on him by article 30, paragraph 3, of the Statute of the Tribunal, appends his separate opinion to the Judgment of the Tribunal.

(initialled) J.-P.C.
Judge GAO, availing himself of the right conferred on him by article 30, paragraph 3, of the Statute of the Tribunal, appends his separate opinion to the Judgment of the Tribunal.

(initialled) Z.G.

Judge LUCKY, availing himself of the right conferred on him by article 30, paragraph 3, of the Statute of the Tribunal, appends his dissenting opinion to the Judgment of the Tribunal.

(initialled) A.A.L.