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OPTIONS FOR COOPERATION FOR THE ESTABLISHMENT OF MARINE PROTECTED AREAS IN MARINE AREAS BEYOND THE LIMITS OF NATIONAL JURISDICTION

Note by the Executive Secretary

I. BACKGROUND

1. In paragraphs 29-30 of its decision VII/5, the Conference of the Parties noted that there are increasing risks to biodiversity in marine areas beyond national jurisdiction and that marine and coastal protected areas are extremely deficient in purpose, numbers and coverage in these areas. The Conference of the Parties agreed that there is an urgent need for international cooperation and action to improve conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction, including through the establishment of further marine protected areas (MPAs) consistent with international law and based on scientific information, including areas such as seamounts, hydrothermal vents, cold water corals and other vulnerable ecosystems.

2. In paragraph 60 of the same decision, the Conference of the Parties recognized that the law of the sea provides the legal framework for regulating activities in marine areas beyond national jurisdiction and requested the Executive Secretary to support the work of the General Assembly in identifying appropriate mechanisms for the future establishment and effective management of marine protected areas beyond national jurisdiction.

3. In its decision VII/28, on protected areas, the Conference of the Parties adopted a programme of work and established an Ad Hoc Open-ended Working Group on Protected Areas. The overall objective of the programme of work is the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas that collectively, *inter alia* through a global network contribute to achieving the three objectives of the Convention and the 2010 target to significantly reduce the current rate of biodiversity loss. The programme of work requires Parties to collaborate with other Parties and relevant partners through the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea to establish and manage protected areas in marine areas beyond national jurisdiction,

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in accordance with international law, including the United Nations Convention on the Law of the Sea, and based on scientific information.

4. In paragraph 29 of decision VII/28, the Conference of the Parties suggested that, as one of its tasks, the Ad Hoc Open-ended Working Group on Protected Areas should explore options for cooperation for the establishment of marine protected areas in marine areas beyond national jurisdiction, consistent with international law, including the United Nations Convention on the Law of the Sea, and based on scientific information.

5. These decisions of the Conference of the Parties have not been taken in isolation, and the issue of conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction have been discussed in many other international and regional forums. These include, most recently, the 59th session of the United Nations General Assembly, the fourth and fifth meetings of the United Nations Open-ended Informal Consultative Process on Oceans and Law of the Sea, the twenty-sixth session of the Committee on Fisheries (COFI), the third informal consultation of States Parties to the Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, the third IUCN World Conservation Congress, as well as the World Parks Congress.

6. Importantly, all of the decisions of the Conference of the Parties reviewed above, as well as the decisions of the General Assembly and the Informal Consultative Process, identify the need for marine protected areas in areas beyond national jurisdiction to be established consistent with international law and based on scientific information. With this in mind, and in order to assist the Ad Hoc Open-ended Working Group with its work on this issue, the Executive Secretary commissioned two background studies. These studies were undertaken with generous funding from the European Union, and include a study of scientific information on biodiversity in marine areas beyond the limits of national jurisdiction (UNEP/CBD/WG-PA/INF/1) and a study on legal aspects for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction (UNEP/CBD/WG-PA/INF/2). The former study incorporated comments received from countries as part of a peer review process. The latter study was reviewed and comments provided by the United Nations Division for Ocean Affairs and the Law of the Sea, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), and the Secretariat of the Convention on Biological Diversity.

7. The present document summarizes and highlights the major findings, conclusions and recommendations of the two studies.

II. SUGGESTED RECOMMENDATIONS

8. The Ad Hoc Open-ended Working Group may wish to adopt a recommendation along the following lines:

"*The Ad Hoc Open-ended Working Group on Protected Areas*,

Recalling paragraphs 29 and 30 of decision VII/5 of the Conference of the Parties, which note that there are increasing risks to biodiversity in marine areas beyond national jurisdiction and that marine and coastal protected areas are extremely deficient in purpose, numbers and coverage in these areas, and agreeing that there is an urgent need for international cooperation and action to improve conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction, including the establishment of further marine protected areas consistent with international law, and based on scientific information, including areas such as seamounts, hydrothermal vents, cold-water corals and other vulnerable ecosystems,

Recalling also paragraph 29 of decision VII/28, by which the Conference of the Parties suggested that the Ad Hoc Open-ended Working Group on Protected Areas should explore options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction, consistent with international law, including the United Nations Convention on the Law of the Sea, and based on scientific information,

Recommends that the Conference of the Parties:

1. *Welcomes* the scientific and legal studies prepared for the first meeting of the Ad Hoc Working Group on Protected Areas (UNEP/CBD/WG-PA/1/INF/1 and UNEP/CBD/WG-PA/1/INF/2), and *expresses its appreciation* to the European Union for its financial assistance in commissioning these studies;

2. *Takes note* of the priority biodiversity areas identified in the scientific study, which include:

(a) Marine areas beyond national jurisdiction of the Indo-Pacific region, specifically centred on South-East Asia, northern Australia and the Tasman Sea;

(b) Seamounts beyond national jurisdiction in the north and south Atlantic, and the Southern Ocean convergence zone;

(c) Marine areas beyond national jurisdiction adjacent to islands in the southern ocean; and

(d) Small shelf areas beyond national jurisdiction in the North-East and North-West Atlantic, as a preliminary set of priority sites for conservation;

3. *Notes* that, in some cases, data on ecosystems and species in areas beyond national jurisdiction is still lacking, and *requests* research organizations and funding agencies to collaborate in filling the identified data gaps, including:

(a) The distribution of all Red-Listed species, especially for fish;

(b) Information on seamount and cold-water coral species from a range of depths, and in particular from poorly sampled areas such as the Indian Ocean;

(c) Associations between cold-water corals and seamounts including underwater features especially of seamounts, so that inferences on cold-water corals can be drawn from seamounts; and

(d) Studies of the features of animals and their behaviours that makes them vulnerable to fishing;

4. *Notes* that there are a large number of relevant global and regional legal instruments that collectively constitute the existing international legal framework for biodiversity in marine areas beyond the limits of national jurisdiction (see annexes II and III below); that within this framework there are significant opportunities for promoting the establishment of marine protected areas beyond the limits of national jurisdiction; and that the establishment of such areas could be facilitated by enhanced coordination among various instruments;

5. *Further notes* the following gaps in the existing international legal framework in relation to the establishment of marine protected areas in areas beyond the limits of national jurisdiction:

(a) It does not adequately address multiple threats to biodiversity in an ecosystem and precautionary context;

(b) It does not provide for sufficient regulation of certain high-seas fisheries;

(c) It lacks an integrated approach to marine protected areas and networks within a biogeographic framework; and

(d) It lacks a mechanism to respond to emerging and intensifying high seas activities;

6. *Notes* that the establishment of marine protected areas in areas beyond the limits of national jurisdiction, consistent with international law, could foster coordination among existing specialized regimes through application of protective measures available under different instruments, and ultimately provide the basis for a comprehensive integrated approach to managing different threats, including emerging threats;

Cooperation and coordination under existing legal instruments

7. *Urges* Parties and other States to cooperate within the framework of existing international legal instruments or arrangements to establish marine protected areas beyond the limits of national jurisdiction, focusing in particular on the priority biodiversity areas identified in the scientific study, including those referred to in paragraph 2 above, taking into account also the need to include areas representing the full range of biodiversity;

8. *Invites* the governing bodies of the United Nations Convention on the Law of the Sea, the International Seabed Authority, the International Whaling Commission, the Food and Agriculture Organization of the United Nations and the International Maritime Organization, as well as those of other relevant global and regional legal instruments and arrangements, to develop mechanisms for coordination amongst themselves and with the Convention on Biological Diversity, in order to effectively implement existing legal instruments and enhance their capacity to respond to key threats to biological diversity in marine areas beyond the limits of national jurisdiction, and *invites* the General Assembly of the United Nations to address the gaps identified in paragraph 5 above and to enhance coordination among relevant agencies;

9. *Invites* the governing bodies of regional fisheries management organizations, regional seas conventions and regional agreements under the Convention on the Conservation of Migratory Species of Wild Animals to initiate and/or strengthen coordination among themselves and with the Convention on Biological Diversity, including undertaking cooperative action towards the establishment of marine protected areas and towards other ways and means to conserve and sustainably use biodiversity in marine areas beyond the limits of national jurisdiction;

10. *Invites* members of the International Maritime Organization to consider further extending Particularly Sensitive Sea Area designations to marine areas beyond the limits of national jurisdiction and, in proposing Particularly Sensitive Sea Areas for approval by the International Maritime Organization, to take into account areas of importance for biodiversity;

11. *Also invites* parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10th December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ("the United Nations Fish Stocks Agreement") to consider the expansion of the scope of the Agreement to include all high-seas fish stocks;

12. *Further invites* the governing bodies of regional seas agreements to consider, where appropriate, expanding their mandate to cover adjacent marine areas beyond national jurisdiction, and to implement, consistent with international law and based on scientific information, appropriate conservation and sustainable use measures in these areas;

13. *Requests* the Executive Secretary to collaborate with other relevant organizations and processes, to facilitate the development of a framework for a more comprehensive approach to integrated ocean management to ensure conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, including developing criteria for selecting sites for marine protected areas and establishing priorities on a scientific basis;

14. *Also requests* the Executive Secretary to contribute to the work of the General Assembly of the United Nations and its Ad Hoc Open-ended Informal Working Group established by paragraph 73 of General Assembly resolution 59/24 to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction;

New mechanisms and instruments

15. *Invites* the General Assembly of the United Nations and Parties to the United Nations Convention on the Law of the Sea to consider the development and adoption of an implementing agreement to the United Nations Convention on the Law of the Sea for the establishment and management of marine protected areas in areas beyond the limits of national jurisdiction;

Other options

16. *Considers* the desirability and feasibility of the following additional options for new mechanisms and instruments regarding the establishment of marine protected areas in areas beyond the limits of national jurisdiction, and *invites* Parties to submit views on these options to be compiled by the Executive Secretary for the consideration of the Working Group:

(a) An implementing agreement to the Convention on Biological Diversity, which would require the amendment of the Convention given its jurisdictional limitations with regard to components of biological diversity beyond national jurisdiction;

(b) A new mechanism under the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage, to enable the recognition and protection of sites of outstanding universal value in marine areas beyond national jurisdiction, which would require amendment of the Convention; or

(c) A global agreement that provides for a network of subsidiary instruments in which groupings of States working within regional organizations are appointed to manage particular areas beyond national jurisdiction, subject to oversight by an international management body.

Further scientific research

17. *Further requests* the Executive Secretary to work with relevant international and regional organizations, including research organizations, to update and build upon the Geographic Information Systems of biodiversity in marine areas beyond the limits of national jurisdiction initiated as part of the scientific study, with a view to supporting, on a scientific basis, the establishment of representative systems of marine protected areas, and to report on progress made to the next meeting of the Ad Hoc Open-ended Working Group.

18. *Requests* the Executive Secretary to transmit this decision to all relevant international and regional organizations."

III. SCIENTIFIC INFORMATION ON POSSIBLE SITES FOR BIODIVERSITY CONSERVATION IN MARINE AREAS BEYOND NATIONAL JURISDICTION

9. Marine areas beyond national jurisdiction cover an estimated 64 per cent of the world's oceans (202 million km^2). Many ecosystems in these areas, such as seamounts, cold-water coral reefs and hydrothermal vents are home to an astonishing diversity of species. Our knowledge of most of these ecosystems is limited because there is little global monitoring of ecosystem-specific features. However, we do know that the biodiversity they support is seriously and increasingly threatened by human activities. The tables in annex I present an overview of the status and trends of, and threats to, biodiversity in marine areas beyond national jurisdiction. Table 1 in annex I addresses ecosystems and habitats; table 2 addresses the biodiversity of fish stocks; while table 3 addresses invertebrates, reptiles, seabirds and marine mammals. The need for rapid action to address threats to biodiversity in marine areas beyond national jurisdiction on the basis of the precautionary approach and the ecosystem approach has been recognized by the Conference of the Parties in decision VII/5.

10. The scientific study prepared for the Working Group (UNEP/CBD/WG-PA/INF/1) presents a map-based analysis of biodiversity in marine areas beyond national jurisdiction, which includes information about the distribution of ecosystems and species, as well as patterns of species richness. This study, which was undertaken in collaboration with the Sea Around Us Project of the Fisheries Centre, University of British Columbia, Canada, compiled a comprehensive set of geographic information system (GIS) maps, which included maps of known cold-water coral and seamount areas, as well as maps of species richness of invertebrate and vertebrate (fish, marine reptiles, seabirds and marine mammals) groups. Threats to biodiversity in marine areas beyond national jurisdiction were explored through maps of predicted extinction risk of commercial fish species and the distribution of red-listed non-fish vertebrates. These maps indicate that marine biodiversity beyond national jurisdiction is richly patterned, with some of these patterns helping to identify areas in need of protection.

11. In order to determine potential locations of priority sites for conservation in marine areas beyond the limits of national jurisdiction, the data from the above analysis were combined. In general, the results confirmed the importance of the tropical Indo-Pacific, and seamounts in the Pacific, Indian and Atlantic Oceans. The relevance of seamounts as priority conservation sites is further highlighted by their apparent association with known cold-water coral reefs, their high invertebrate and fish species richness, as well as the threats they face from human impacts. Species richness of fish and invertebrates are generally highest in the tropics, particularly in South-East Asia. In addition, several areas of particularly high species richness associated with seamounts emerged in the Indian and Pacific Oceans, many of them in the tropical belt. In the Atlantic, only a few areas of particularly high species richness were indicated, and these are associated with seamounts. However, two additional areas of high species richness, which

were not associated with seamounts, but overlap with important fishing grounds, were also highlighted in the shelf areas of North-East and North-West Atlantic. The greatest seabird-species richness occurred in the southern hemisphere, with isolated islands in the Southern Ocean serving as important nesting grounds around which feeding occurs. A map of combined non-fish vertebrate species richness, which included seabirds, also indicated a potential area of high biodiversity in the Tasman Sea. The combined species richness maps for all marine taxa and all higher vertebrates and fish confirmed the importance of the tropical Indo-Pacific, as well as seamount areas in the Pacific, Indian and Atlantic Oceans, and the Southern Ocean convergence zone.

12. The need to implement specific conservation efforts in those areas of the Indo-Pacific that are outside national jurisdiction was further corroborated by the analysis of threatened marine non-fish vertebrates. In this case, the high seas areas of the south-west Pacific are home to particularly threatened non-fish vertebrates, a pattern mainly driven by seabirds. However, the mean risk of extinction for commercially exploited marine fish species was most significant in the higher latitudes. This may reflect the long history of intensive exploitation in these regions. The relatively lower indicated extinction risk in the tropics may be a result of lower catch data resolution, which may have led to an underestimate of the extinction risk of individual fish species in these areas.

13. Based on the above analysis of patterns of species richness in marine areas beyond national jurisdiction, preliminary observations can be made about priority biodiversity areas for protection. In order of priority, the analysis highlights the following areas for targeted conservation action:

(a) The marine areas beyond national jurisdiction of the Indo-Pacific, specifically centred on South-East Asia, northern Australia and the Tasman Sea;

(b) Seamounts beyond national jurisdiction in the North and South Atlantic, and the Southern Ocean convergence zone. These areas are especially significant since protection of seamounts and surrounding areas will more than likely also protect cold-water corals;

(c) Marine areas beyond national jurisdiction adjacent to islands in the Southern Ocean; and

(d) Small shelf areas beyond national jurisdiction in the North-East and North-West Atlantic.

14. The analysis did not take into consideration threatened marine fish and invertebrates. Once such an analysis is completed, alternative and additional priority areas for action may emerge. It is also noted that data on ecosystems and species in marine areas beyond the limits of national jurisdiction is still lacking, and the investigation identified priority data gaps as follows:

(a) The distribution of all Red-Listed species, especially for fish;

(b) Information on seamount and cold-water coral species from a range of depths, and in particular from poorly sampled areas such as the Indian Ocean;

(c) Associations between cold-water corals and seamounts including underwater features especially of seamounts, so that inferences on cold-water corals can be drawn from seamounts (where an increasing amount of information is available); and

(d) Studies of the features of animals and their behaviours that makes them vulnerable to fishing.

15. This analysis of patterns of species richness in marine areas beyond the limits of national jurisdiction presents a first look at priority biodiversity areas that can be used to select sites for

immediate conservation action. In the longer term, and in accordance with the objectives stated in decisions VII/28 and VII/5, systems of ecologically representative marine protected areas would need to be established in areas beyond the limits of national jurisdiction. This would require the development of a bioregional framework for oceans management, as well as the establishment of criteria for site selection. The data layers created as part of the scientific study provide the basis for a global geographic information system (GIS) database of biodiversity in marine areas beyond the limits of national jurisdiction that can be expanded and built upon in the future to support the establishment of representative systems of marine protected areas. However, even though our current knowledge of biodiversity in marine areas beyond the limits of national jurisdiction is far from complete, cooperative action in the context of precaution can be taken immediately to target areas in particular need of protection, such as the priority biodiversity areas identified here. In this context, the legal analysis in annex VI below provides specific illustrative examples of how the priority biodiversity areas identified in the scientific study could be protected under existing legal regimes.

IV. THE INTERNATIONAL LEGAL REGIME OF THE HIGH SEAS AND THE SEABED BEYOND NATIONAL JURISDICTION

16. The legal study prepared for the first meeting of the Ad Hoc Working Group on Protected Areas (UNEP/CBD/WG-PA/1/INF/2), which was undertaken in collaboration with the IUCN Global Marine Programme and the Task Force on High Seas Marine Protected Areas of the IUCN World Commission on Protected Areas (WCPA), analyses the framework provided by the United Nations Convention on the Law of the Sea and its application to marine areas beyond national jurisdiction, together with specific provisions in that Convention and other global and regional agreements that offer options for establishing marine protected areas in these areas. It then reviews the adequacy of the existing legal regime for establishing marine protected areas beyond national jurisdiction and considers its adequacy with respect to the priority biodiversity areas identified in the scientific study. Information on existing global and regional legal instruments is provided in annex II and annex III, respectively. Annex IV contains information on major non-binding global instruments. Annexes V and VI relate existing international legal instruments, respectively, to: (i) threats and activities; and (ii) priority biodiversity areas identified in section III above.

17. The international legal regime for marine areas beyond national jurisdiction is made up of a number of global and regional legal instruments. The global instruments include the United Nations Convention on the Law of the Sea and its implementing agreements (the 1994 Agreement Relating to the Implementation of Part XI of the Convention and the 1995 Fish Stocks Agreement), the Convention on Biological Diversity, the 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the 1946 International Convention on the Regulation of Whaling, the International Maritime Organization (IMO) conventions, the Convention on the Conservation of Migratory Species of Wild Animals (CMS), and the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). The regional instruments include the various regional seas conventions, regional fisheries management conventions, and regional species-specific agreements under the Convention on Migratory Species.

18. The legal study examines the adequacy of the existing international legal regime as a framework for the conservation and sustainable use of biological diversity in marine areas beyond the limits of national jurisdiction and identifies major gaps. Broadly speaking, the adequacy of the international legal regime is examined from three critical perspectives: coverage of vulnerable ecosystems and threats (activities); coverage in terms of ocean space; and coverage in relation to priority biodiversity areas. It reached a number of conclusions relevant for the consideration of options for cooperation for the establishment of marine protected areas beyond national jurisdiction:

(a) While the mandate to identify and protect priority biodiversity areas generally exists in some form under existing instruments, effective measures to give effect to this mandate in areas beyond national jurisdiction are limited. Indeed, the concern over impacts of activities on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction as well as the effort to identify priority biodiversity areas, and the scientific means to do so, are relatively recent. Existing protected areas beyond national jurisdiction relate to specific activities. They are limited to two whaling sanctuaries in the Indian and Southern Oceans under the International Whaling Convention; two Special Areas under the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) in the Southern Ocean and the Mediterranean, with respect to vessel-source pollution; one Specially Protected Area of Mediterranean Interest (SPAMI) serving as a marine mammal sanctuary under the Mediterranean regional seas convention; six fully protected marine areas under the Antarctic Treaty (and, in some cases, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)) and additional sites that are partially marine; three seal reserves under the Antarctic Seals Convention and additional seasonal closings; and an unknown number of closed areas and seasonal closures, as well as other types of area-based conservation measures, under various regional fisheries management organizations;

(b) As regards activities, international shipping, whaling, fisheries and mining are covered by detailed global instruments (see annex V below). With respect to fisheries, although detailed global and regional instruments exist, there are also a number of important gaps. Regional fisheries management organizations have not yet been established in certain high-seas areas where fisheries take place, so no agreed conservation and management measures are in place. Moreover, the measures adopted by some regional fisheries management organizations do not yet reflect a broader ecosystem approach. In addition, there is growing awareness of discrete high-seas fish stocks associated, for example, with seamounts, which was not the case when the United Nations Convention on the Law of the Sea and the United Nations Fish Stocks Agreement were adopted. While all high-seas living resources are covered by the United Nations Convention on the Law of the Sea, the United Nations Fish Stocks Agreement covers only straddling stocks and highly migratory stocks, not discrete stocks. Potential threats posed by other activities, such as anthropogenic noise, marine scientific research, the laying of undersea cables, and bioprospecting have not yet been addressed at the global level except under general obligations in the United Nations Convention on the Law of the Sea regarding the protection and preservation of the marine environment;

(c) With respect to coverage of ocean space, it should be noted that the instruments governing shipping and mining activities in the seabed and ocean floor beyond the limits of the national jurisdiction (designated as “the Area” in the United Nations Convention on the Law of the Sea) are applicable to all areas beyond national jurisdiction. To date, there have been few actual designations of protected marine areas beyond national jurisdiction under the shipping instruments, and none by the International Seabed Authority. The regional seas agreements cover very limited areas beyond national jurisdiction. However, there have been a few designations of marine protected areas in the Antarctic Treaty area and one in the Mediterranean that include areas beyond national jurisdiction. Although the existing regional fisheries management organizations together cover large areas beyond national jurisdiction, much of the coverage is limited to target species like tuna and salmon. Only five regional fisheries management organizations cover all or most species within their geographic area, which excludes the Pacific and Indian Oceans and a large section of the southern Atlantic Ocean. Many of the instruments do not provide for non-target species and associated habitat conservation based on the ecosystem approach;

19. With respect to the priority biodiversity areas referred to in the previous section (see para. 11), “special protection” status under existing global instruments is limited to: the whaling sanctuary in the Indian Ocean, which would appear to be relevant to biodiversity protection in parts of the Indo-Pacific; and MARPOL 73/78 Special Area status in the Southern Ocean (to reduce pollution from oil, noxious

liquid and garbage), which would appear to reduce these types of pollution as a source of impact on seamount priority biodiversity areas in the South Atlantic. Regional agreements exist for the North-West Atlantic, North-East Atlantic, South-West Pacific, South Atlantic within the Southern Ocean convergence zone, Eastern Pacific, Western Pacific, Indian Ocean and the Tasman Sea. Nevertheless, for both the North-West and North-East Atlantic priority areas of seamounts and high seas over the extended continental shelf, only limited special protections for biodiversity have been adopted. In this respect it may be noted that for the North-East Atlantic the regional fisheries body (the North East Atlantic Fisheries Commission (NEAFC)) agreed in November 2004 to close five seamounts and part of the Reykjanes ridge on the high seas to fishing for three years to protect vulnerable deep-sea habitats. Similarly, in the South-West Pacific, Western Pacific, Indian Ocean and South Atlantic, protection measures applicable would seem to be limited to the impact of fishing activities, especially bycatch (seabirds, sea turtles, marine mammals). Certain fisheries, such as bottom trawl fisheries, are currently unregulated or inadequately regulated in the Indo-Pacific region and South Atlantic. Their regulation in the North Atlantic to date has been inadequate to protect biodiversity.

20. A number of gaps can be identified in the existing international legal framework:

(a) There is an inadequate regulation of impacts from certain high-seas fisheries. Much of the oceans (Pacific and Indian Oceans and parts of the South Atlantic) are not covered by regional fisheries management organizations with the legal competence to regulate high seas bottom fisheries or the impacts of bottom trawling. Most existing regional fisheries management organizations have not adopted measures giving effect to an ecosystem approach for conserving non-target species and habitat. Inadequate compliance and enforcement undermines current fisheries conservation and management measures. While a number of measures are available to establish area protections from fisheries impacts, few have been widely employed, and effective global oversight of high-seas fisheries conservation and management is lacking;

(b) The extent and magnitude of threats from marine debris, dumping, noise pollution, and bioprospecting are only beginning to emerge, and little is known about threats from the laying of undersea cables. This makes it difficult to evaluate the adequacy of the existing legal framework in this respect;

(c) The existing international legal framework is fragmented and requires coordination. There is need for an integrated approach to protecting priority biodiversity areas in marine protected areas beyond national jurisdiction from different threats governed by more than one specialized management regime, and in order to address emerging threats for which no specialized regime yet exists. This gap requires enhanced coordination among specialized regimes. In cases where priority biodiversity areas are not under a clear and present threat, they may benefit from proactive recognition that lays the groundwork for management planning. The means to promote and facilitate such coordination and planning seem lacking at both regional and global levels;

(d) There is need for a mechanism to coordinate individual designations of marine protected areas within a larger ecosystem and biogeographic framework. The lack of such a mechanism and framework constrains the development of a more comprehensive approach to integrated ocean management that ensures the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.

V. OPTIONS FOR COOPERATION FOR THE ESTABLISHMENT OF MPAS IN MARINE AREAS BEYOND THE LIMITS OF NATIONAL JURISDICTION

21. The legal study identifies a number of options for cooperation with regard to the establishment of marine protected areas beyond the limits of national jurisdiction. These include further use and improvement of existing global and regional instruments; integration and coordination amongst existing instruments; and the development of new mechanisms and instruments.

A. Use and improvement of existing instruments

22. The Particularly Sensitive Sea Areas (PSSAs) designations under IMO instruments could be further extended to areas beyond the limits of national jurisdiction and more stringent protective measures adopted. There are few, if any, restrictions on the types of protective measures available under different IMO instruments that may be associated with these designations. Among the binding measures available are discharge restrictions, ships' routing measures, and mandatory reporting. Others could also be considered, such as stricter measures on ballast water exchange. States proposing PSSAs for IMO approval can tailor proposals to protect particular priority biodiversity areas and the specific threats posed by shipping activities, both in areas beyond national jurisdiction and/or at the intersection of national areas and areas beyond national jurisdiction.

23. The scope of the United Nations Fish Stocks Agreement could be expanded to include all high-seas fish stocks. This would require that precautionary and ecosystem approaches are applied in conservation and management measures for discrete stocks like those associated with seamounts, including measures to protect biodiversity in the marine environment. The mandates of a number of regional fisheries management organizations could be expanded to cover areas beyond national jurisdiction. Moreover, there is substantial scope for the application of geographically-based protective measures including closed areas, interim prohibitions on destructive fishing practices like bottom trawling that adversely impact vulnerable marine ecosystems, or other measures to eliminate destructive fishing practices affecting priority biodiversity areas. The tools available to regional fisheries management organizations to protect priority biodiversity areas could be further elaborated through the FAO guidelines on the ecosystem approach to fisheries management. More effective oversight of high-seas fisheries conservation and management is needed to ensure the conservation and sustainable use of shared marine biodiversity. FAO already plays a role in bringing together secretariat representatives of regional fishery bodies at biennial meetings. There may be need to establish a mechanism for global oversight of regional fisheries management organizations to promote a more systematic approach to the implementation of the United Nations Fish Stocks Agreement.

24. The geographical scope of some regional seas agreements could be expanded to cover adjacent high-seas areas, subject, of course, to the constraint that these agreements do not govern non-Parties and that measures adopted pursuant to them must be consistent with the United Nations Convention on the Law of the Sea and its provisions on high-seas freedoms. Coordination with other relevant agreements could also be developed and enhanced.

25. As regards the regime of the Area and its resources, there exists the possibility of establishing a global network of hydrothermal vent sites for integrated study and long-term scientific observation. In addition, the "preservation reference zones" contemplated under the rules and regulations of the International Seabed Authority should be protected not only from mining but also from other activities. The regulation of vulnerable areas through the International Seabed Authority should be expanded to cover not only the exploitation stage but also activities during the prospecting and exploration stages. Internationally agreed criteria for the identification of sites of critical importance and sensitivity in the seabed beyond national jurisdiction may need to be developed.

26. States may need to enhance cooperation with respect to environmental impact assessment procedures relating to activities with transboundary impacts. Already the existing international instruments such as the United Nations Convention on the Law of the Sea, the rules and regulations of the International Seabed Authority, the London Dumping Convention, the Antarctic Protocol, the United Nations Fish Stocks Convention, and the Convention on Biological Diversity require Parties to assess the impacts of activities and processes under their jurisdiction and control to the environment of areas beyond national jurisdiction, and to ensure appropriate notification and consultation regarding such activities and processes. States could cooperate, at international and regional levels, in identifying such activities and processes and in implementing environmental impact assessment procedures with respect to the Area or in specific regions.

27. There is also an important latitude for further collaboration among like-minded States within the framework of existing instruments to establish protective measures for specific bio-geographic regions through binding and non-binding arrangements. While such arrangements may not have any binding effect on non-participating States, they may gain wider recognition and effect through broader international agreements.

B. Integration and coordination

28. Due to the proliferation of instruments and the fragmentation of the international legal framework there is an increasing and urgent need for the development of mechanisms for coordination. Already a number of instruments contain provisions regarding coordination among relevant instruments and bodies. At the global level, they include specific provisions for consultation and cooperation between the International Seabed Authority and UNESCO with respect to the protection of underwater cultural heritage, or more general suggestions that PSSAs might be listed on the World Heritage List, declared a Biosphere Reserve, or included on another list of areas of international or regional importance. In addition, there is need to enhance coordination within the framework of the United Nations General Assembly. In this regard, the recent establishment of the Oceans and Coastal Areas Network (UN-Oceans), a new inter-agency mechanism for coordination and cooperation on issues relating to oceans and coastal issues is a welcome development. 1/

29. Regional agreements on protected areas for the North-East Atlantic and Antarctica provide explicitly for coordination with the relevant fishing and/or shipping instruments. The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) provides for coordination with the Mediterranean regional seas instruments in habitat protection for cetaceans, while the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) specifies that conservation, research, and management measures be applied in conjunction with other competent bodies.

30. There is also opportunity for coordination with respect to the development and application of standards and criteria. For example, annex IV of the 1991 Antarctic Protocol incorporates the stricter requirements of Special Area designation under MARPOL 73/78 with respect to pollution from oil, noxious liquid substances, and plastics and garbage.

31. At the regional level, there is need for coordination between regional fisheries management organizations, regional seas conventions and regional agreements under the Convention on Migratory Species. For example, members of regional fisheries management organizations may need to incorporate into their conservation and management measures appropriate restrictions on fishing activities in areas identified as essential habitat under the agreements concluded within the framework of the Convention on Migratory Species. For priority biodiversity areas in the North-East Atlantic coordination is

1/ See General Assembly resolution 59/24, paragraph 93.

imperative between OSPAR, NEAFC, ASCOBANS and the European Union. Similarly, in the South Pacific, regarding the high-seas areas covered by the Convention for the Protection of Natural Resources and Environment of the South Pacific, there a possibilities for coordination between the South Pacific Regional Environment Programme (SPREP), the Western and Central Pacific Fisheries Commission (WCPFC), and parties to the Agreement on the Conservation of Albatrosses and Petrels under the Convention on Migratory Species. Coordination and cooperation will also be required at the interface between national and international zones as protected area networks continue to evolve under the regional seas agreements, and as priority biodiversity areas beyond national jurisdiction are identified. Specifically in relation to the priority biodiversity areas identified in the scientific study, further cooperation and coordination could be developed between coastal States and relevant bodies to address fishing impacts on sedentary species of extended continental shelves: in the Northeast Atlantic between relevant coastal States, the European Community, and the North-East Atlantic Fisheries Commission; and, in the Northwest Atlantic, between relevant coastal States and the Northwest Atlantic Fisheries Organization (NAFO).

C. New mechanisms and instruments

32. The major gaps in the existing international legal framework regarding cooperation for establishment of marine protected areas in marine areas beyond national jurisdiction lie in the regulation of high seas fisheries and the development of an integrated approach to marine protected areas and networks within a biogeographic framework.

33. There are clear gaps in the ability to protect priority biodiversity areas through proper regulation of fishing activities, not only in the failure of existing mandates and measures under regional fisheries management organizations to fully reflect the ecosystem and precautionary approaches to fisheries management of the United Nations Fish Stocks Agreement and other international instruments, but also in the geographic coverage by regional fisheries management organizations of certain types of fisheries. To address these gaps, the United Nations General Assembly in 2005 called upon States to urgently cooperate in establishing new regional fisheries management organizations or arrangements, where necessary and appropriate, with the competence to regulate bottom fisheries and the impacts of fishing on vulnerable marine ecosystems in areas where no such relevant organization or arrangement exists. 2/ It further called upon members of regional fisheries management organizations or arrangements without the competence to regulate bottom fisheries and the impact of fishing on vulnerable marine ecosystems to expand the competence of such organizations or arrangements in order to address these threats. In this regard, new regional fisheries management organizations and arrangements are needed for bottom fisheries, including around seamounts, in the Indian Ocean, Tasman Sea, and, possibly, the Eastern Pacific. New mechanisms at the global level for promoting the rapid upgrade of the conservation mandates of the regional fisheries management organizations might also be contemplated.

34. There are also significant opportunities for greater cooperation and coordination among competent global and regional bodies, both to identify marine areas requiring protection and to identify activities and processes that adversely impact the biodiversity of these areas. The roles of the Convention on Biological Diversity, the International Seabed Authority, the International Whaling Commission, FAO, IMO, regional fisheries management authorities, regional seas bodies, and Agreements under the Convention on Migratory Species have already been mentioned, as have some specific avenues for further cooperation. The annual discussions in the United Nations General Assembly, United Nations Informal Consultative Process on Oceans and the Law of the Sea, and informal consultations of States parties to the United Nations Fish Stocks Agreement are key forums to promote more coordinated and integrated approaches.

2/ General Assembly resolution 59/25.

35. As has been stated, beyond the general mandate in the United Nations Convention on the Law of the Sea, currently there is no global agreement encompassing the concept of protecting priority biodiversity areas *per se* in order to achieve the goal of conserving the biological diversity and productivity of the oceans beyond national jurisdiction, including ecological life support systems. Only limited means to identify and protect these areas *before* activities pose threats exist; and coordinated approaches through different legal instruments is the only way to take an integrated approach to the different threats to these areas. Marine protected areas beyond national jurisdiction could serve as a coordinating framework for existing specialized regimes, drawing on the model of the PSSAs which provide a framework for the application of associated protective measures available under different IMO instruments. Marine protected areas could ultimately provide the basis for a comprehensive, integrated approach to managing different threats, including from emerging uses. Marine protected areas offer an opportunity to practice integrated management at a smaller scale, through voluntary arrangements and coordination among different specialized regimes, while the possibility of larger-scale reforms, including new instruments within the framework of the United Nations Convention on the Law of the Sea, are considered. In order to make progress toward networks of marine protected areas beyond national jurisdiction, one option would be to consider a staged approach of first identifying and then protecting these areas, making use of non-binding and, possibly, binding instruments.

36. To identify agreed priority biodiversity areas, a global framework is necessary based on agreed goals and criteria for selecting sites and establishing priorities on a scientific basis, as is currently done under some regional seas agreements. This framework would likely also have to reflect biogeographic areas and give some indication of concepts of scale. The Convention on Biological Diversity could play a coordinating role in the development of such a framework.

37. Another option is to consider the development of a binding legal instrument that provides for identification and establishment of marine protected areas beyond the limits of national jurisdiction, presumably pursuant to an existing convention. This could take the form of:

(a) An implementing agreement to the United Nations Convention on the Law of the Sea, adopted in a similar manner as the 1995 United Nations Fish Stocks Agreement and the 1994 Part XI Agreement;

(b) An implementing agreement to the Convention on Biological Diversity, which would require the amendment of the Convention given its jurisdictional limitations with regard to components of biological diversity in areas beyond the limits of national jurisdiction;

(c) A new mechanism under the Convention concerning the Protection of the World Cultural and Natural Heritage (1972), to enable the recognition and protection of sites of outstanding universal value in marine areas beyond national jurisdiction, which would require amendment of the Convention; or

(d) A global agreement that provides for a network of subsidiary instruments in which groupings of States working within regional organizations are appointed to manage particular areas beyond national jurisdiction, subject to oversight by an international management body.

38. Any new agreement on establishing marine protected areas beyond the limits of national jurisdiction would encounter difficulties regarding adherence by States and decision-making. First, without widespread adherence to the agreement, protective measures for the areas concerned might be undermined by non-Parties. Secondly, the procedures for approving new designations of marine protected areas would have to balance the Parties' interests in protecting particular areas with other States' concerns regarding high-seas freedoms.

Annex I

STATUS AND TRENDS OF, AND THREATS TO, ECOSYSTEMS AND SPECIES IN MARINE AREAS BEYOND NATIONAL JURISDICTION

Table 1: Status and Trends: High Sea and Deep-Sea Habitats (modified from Baker* et al. *2001)

Habitat	Status	Trend and immediate threats	Potential threats
Seamounts	Less than 200 seamounts have been studied; high endemism on studied seamounts; some seamounts are heavily exploited for fisheries resources, trawling damages benthic habitats. Few seamounts protected by MPAs	High seas fishing on seamounts to continue especially in the Southern Ocean; impacts are not monitored; it is anticipated that heavily exploited stocks will be threatened with over exploitation - therefore fish biodiversity threatened; attention to managing and protecting seamounts is increasing (e.g. Bowie Seamount (Canada), and fishing restrictions on EU vessels in the Azores)	Mining of ferromanganese oxide and polymetallic sulphides, climate change
Deep-water corals	Limited knowledge, they may be more widespread than currently known; high diversity, except for fish and molluscs compared to tropical reefs; easily damaged by trawling, but spatial extent unknown	Fishing on coral or adjacent to coral reefs with consequential damage still occurs, especially in areas outside of exclusive economic zones. As fisheries continue to move further offshore and into deeper waters the threat to these habitats will continue since these areas are often now in the high seas and outside of national jurisdictions. Many countries are identifying coral areas and initiating action to protect them from fishing.	Biotechnology, bioprospecting and climate change; gas and oil platforms can damage corals
Hydrothermal vents	Limited disturbances – currently due to limited research on vents, low number of species, but high endemism and high abundance. Two vent areas (Canada and Azores) are declared MPAs.	Research community is initiating self-policing activities regarding impact of research activities so it is anticipated in the short-term that impacts from research will decline; in the long-term commercial exploitation is a concern.	High potential for biotechnology, mining, energy and high-end tourism
Open ocean pelagic	Highly dynamic and diverse ecosystem is heavily exploited globally Also increasing levels of pollution and eutrophication impacting on biodiversity	Overall continuing decline in biodiversity as fishing further offshore and deeper continues; the impact of climate change may exacerbate decline.	Climate change, expansion of aquaculture into the open ocean/high seas
Deep-sea trenches	Unique 'hadal' fauna, much of it associated with soft sediments and holothurians; high endemism; diverse and abundant bacterial community; no known disturbances	Research is increasing in these areas, but, it is anticipated that based on experience of hydrothermal vents, appropriate guidelines will be developed to minimize the impacts of research on these ecosystems.	Research, biotechnology and waste disposal
Cold seep and pockmarks	Limited knowledge; high endemism; limited disturbances except for Gulf of Mexico (trawling and oil exploitation) or research sites	As fishing and gas and oil operations continues to go further offshore and deeper, anticipate that disturbance may increase.	Biotechnology and mineral exploitation

Habitat	Status	Trend and immediate threats	Potential threats
Submarine canyons	High diverse flora and fauna with commercial important species such as lobsters; important nursery areas; areas impacted by fishing and oil exploitation	As fishing and gas and oil operations continues to go further offshore and deeper, anticipate that disturbance may increase.	Gas and oil developments

Table 2: Summary of the status, trends, and threats to biodiversity of fish stocks

Ecosystem[a]	Status	Trend	Threats
Seamounts & deep water coral reefs	Many species such as Patagonian toothfish and Orange roughy are overfished, including in areas outside of EEZs. Areas that were fished more than 20 years ago are not showing signs of recovery.	Continued declines in biodiversity due to over fishing except in MPAs or areas where fishing is restricted; recovery of some stocks may take decades once fishing ceases.	Overfishing, climate change
Open ocean pelagic	Concern over specific tuna (e.g. Bigeye in the Pacific, and Bluefin in the Atlantic).	Continued over fishing as aquaculture expands and the demand for fish and fish oil continues to grow.	Overfishing, aquaculture, climate change, pollution, eutrophication.

[a] Information on fish stocks associated with thermal vents is not available; they are presently likely not threatened (see Cone 1991).

Table 3: Summary of the status, trends, and threats to species diversity in marine areas beyond the limits of national jurisdiction

Species or groups	Status	Trend	Threats
Invertebrates	Limited knowledge, except for cephalopods, which are strongly exploited	Cephalopods increasing where fishing has reduced the biomass of bony fish, but compensatory potential has limits.	Overexploitation
Reptiles	Most species of turtles under threat	Declining, in spite of some success of mitigation	By-catch
Seabirds	Biodiversity declining rapidly	New gear technology, if widely implemented, may provide hope of recovery	By-catch, prey depletion
Marine mammals	Modest to good knowledge of population sizes in some groups. Population trends and abundance in beaked whales unknown	Some species of baleen whales recovering from historic depletion. Some dolphins recovering from by-catch mortality in tuna fisheries. Some others affected by increase in fishing on their prey.	By-catch, especially for smaller species. Fishing on their prey organisms. Resumption of commercial whaling

Annex II

MAJOR GLOBAL CONVENTIONS AND PARTICIPATION

Convention/Agreement	Year	Parties
United Nations Convention on the Law of the Sea (UNCLOS) www.un.org/depts/los	1982	148
Agreement relating to Implementation of Part XI of the Convention on the Law of the Sea	1994	121
Convention on Biological Diversity (CBD) www.biodiv.org	1992	188
Agreement for the Implementation of the Provisions of the UN 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 (UNFSA) www.un.org/depts/los	1995	52
Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement) www.fao.org	1993	29
International Convention for the Regulation of Whaling (IWC) www.iwcoffice.org	1946	60
Convention on the Conservation of Migratory Species of Wild Animals (CMS) www.cms.int	1979	89
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) www.cites.org	1973	167
UNESCO Convention on the Protection of the Underwater Cultural Heritage www.unesco.org/culture/laws/underwater	2001	Not in force
International Maritime Organization (IMO) conventions		
International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78): (Annex I/II)	1973/78	132

Convention/Agreement	Year	Parties
Convention on Safety of Life at Sea (SOLAS)	1974	158
International Convention for the Control and Management of Ships' Ballast Water and Sediments	2004	Not in force
Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention – 1972)	1972	85
Protocol of 1996 of the London Convention of 1972	1996	Not in force

Annex III

REGIONAL LEGAL INSTRUMENTS APPLICABLE TO MARINE AREAS BEYOND NATIONAL JURISDICTION

Regional seas agreements

These agreements do not affect the rights of non-Party States that may be active in the region (e.g., shipping, fishing).

Convention on the Protection of the Marine Environment of the North East Atlantic, 1992 (replaces 1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft and the 1974 Convention for the Prevention of Marine Pollution from Land-Based Sources) – www.ospar.org

- Annex I – Prevention and Elimination of Pollution from Land-Based Sources (1992);
- Annex II – Prevention and Elimination of Pollution by Dumping or Incineration (1992);
- Annex III – Prevention and Elimination of Pollution from Offshore Sources (1992);
- Annex IV – Assessment of the Quality of the Marine Environment (1992);
- Annex V – Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area (1998).

Regional Parties to the Convention: 16

Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean or Barcelona Convention (1976, amended in 1995) – www.unepmap.org

- Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (1976, amended in 1995);
- Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (2002, replacing the 1976 Protocol);
- Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (1980, amended in 1996);
- Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995, replacing a previous 1982 Protocol);
- Protocol Concerning Pollution Resulting from Exploration and Exploitation of the Continental Shelf, the Seabed and its Subsoil (1994);
- Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (1996).

Regional Parties to the Convention: 22

Convention for the Protection of Natural Resources and Environment of the South Pacific Region (1986) – www.sprep.org.ws

- Protocol for the Prevention of Pollution of the South Pacific Region by Dumping (1986);
- Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region (1986).

Regional Parties to the Convention:

Antarctic Treaty (1959)
Protocol on Environmental Protection (1991)

- Annex I – Environmental Impact Assessment (1991);
- Annex II – Conservation of Antarctic Fauna and Flora (1991);
- Annex III – Waste Disposal and Waste Management (1991);
- Annex IV – Prevention of Marine Pollution (1991);
- Annex V – Area Protection and Management (1992).

Parties to the Convention: 43

Regional fisheries management organizations (RFMOs) and the conventions establishing them)

No study has been undertaken to determine whether every State fishing in the area of application of each of the conventions below has become a party to the convention concerned

Competence over all living marine resources, except as noted:
CCAMLR - Commission under the Convention on the Conservation of Antarctic Marine Living Resources (1980) – www.ccamlr.org;
GFCM – Commission under the Agreement for the Establishment of the General Fishery Commission for the Mediterranean (1949, rev. 1997) – www.fao.org/fi;
NAFO – Organization under the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries (except sedentary species) (1978) – www.nafo.ca;
NEAFC – Commission under the Convention on Future Multilateral Cooperation in North East Atlantic Fisheries (except sedentary species and highly migratory species) (1980) – www.neafc.org;
SEAFO – Organization under the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (2001) – www.mfmr.gov.na/seafo/seafo.htm;

Competence over specific species:
CCSBT - Commission under the Convention for the Conservation of Southern Bluefin Tuna (1993) – www.ccsbt.org;
IATTC - Commission under the Convention for the Establishment of an Inter-American Tropical Tuna Commission (1949, rev. 2003) – www.iattc.org;
- Agreement for the International Dolphin Conservation Programme (IDCP, 1998)

ICCAT - Commission under the International Convention for the Conservation of Atlantic Tunas (1996 and 1984 and 1992 protocols) – www.iccat.es;
IOTC – Commission under the Agreement for the Establishment of the Indian Ocean Tuna Commission (1993) – www.iotc.org;
WCPFC - Commission under the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (2000) – www.ocean-affairs.com;
NASCO – Organization under the Convention for the Conservation of Salmon in the North Atlantic Ocean (1982) – www.nasco.int;
NPAFC – North Pacific Anadromous Fish Commission under the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean (1992) – www.npafc.org.

Competence over areas within national jurisdiction:
IBSFC – Commission under the Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and Belts (1973);
IPHC – Commission under the Convention Between the United States and Canada for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea (1953 and 1979 Protocol);
PSC – Pacific Salmon Commission under the Treaty between the Government of the United States of America and the Government of Canada Concerning Pacific Salmon (1985 and 1999 Amendments) – www.psc.org.

Convention on Migratory Species – Agreements - www.cms.int

Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS, 1992) – www.ascobans.org
8 of 15 Range States are Parties.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA, 1995) - www.cms.int/species/aewa

49 of 117 Range States of the Atlantic and Indian Oceans are Parties.

Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS, 1996) – www.cms.int/species/accobams

17 of 28 Range States are Parties.

Agreement on the Conservation of Albatrosses and Petrels (ACAP, 2001) – 25 Range States of the Pacific and Southern Oceans - www.cms.int/species/acap, www.acap.aq.

6 of 25 Range States are Parties.

Competence over areas within national jurisdiction:

Agreement on the Conservation of Seals in the Wadden Sea (1990) – www.cms.int/species/wadden_seals

3 of 3 Range States are Parties.

Non-binding memoranda of understanding (MOUs) and competence over areas within national jurisdiction:

MOU concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa (1999) – www.cms.int/species/africa_turtle

19 of 26 Range States have signed.

MOU on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (2001) – www.cms.int/species/iosea.

20 of 41 Range States have signed.

Other Relevant Regional Agreements

Convention for the Conservation of Antarctic Seals (1972).

Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific (1989, 1990 protocols).

Convention on Conservation and Management of Pollock Resources in the Central Bering Sea ("Donut Hole" Agreement, 1995).

Agreement to end unregulated fisheries of regulated stocks in the high seas area of the Barents Sea ("Loophole" Agreement, 1999).

Competence over areas within national jurisdiction:

Inter-American Convention for the Protection and Conservation of Sea Turtles (1996) – www.seaturtle.org (9 of 12 signatory States are Parties).

Annex IV

MAJOR NON-BINDING GLOBAL INSTRUMENTS THAT REINFORCE OR SUPPLEMENT THE BINDING INTERNATIONAL LEGAL REGIME FOR MARINE AREAS BEYOND THE LIMITS OF NATIONAL JURISDICTION

FAO Code of Conduct for Responsible Fisheries, 1995

FAO International Plans of Action:

- to reduce the incidental catch of seabirds in long-line fisheries (1999);
- for the conservation and management of sharks (1999);
- for the management of fishing capacity (1999);
- to prevent, deter and eliminate illegal, unreported and unregulated fishing (2001).

UN General Assembly Resolution on Large-Scale Pelagic Driftnet Fishing and its Impacts on the Living Marine Resources of the World's Oceans and Seas, 1991 (A/RES/46/215, 1991).

UNEP Global Programme of Action on Protection of the Marine Environment from Land-Based Activities (1995), *with respect to areas like the Mediterranean Sea where national jurisdiction over the water column for the most part does not extend beyond the 12 n.m. territorial sea.*

UNEP Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals (1984, rev. 1997).

UNESCO Action Plan for Biosphere Reserves (1984) and the Seville Strategy and Statutory Framework for the World Network of Biosphere Reserves (1995).

Agenda 21: Action Programme of the United Nations Conference on Environment and Development (1992), paras. 17.46 (e) and (f), 17.86.

Plan of Implementation of the World Summit on Sustainable Development (2002), para. 32 (a) and (c).

Annex V

THREATS FROM HUMAN ACTIVITIES AND THE MAJOR CONVENTIONS GOVERNING THEM IN AREAS BEYOND NATIONAL JURISDICTION*

Threats/activities	*Major legal instruments*
Fishing Overharvesting Bycatch Destructive fishing practices Marine debris	UNCLOS International Whaling Convention UN Fish Stocks Agreement FAO Compliance Agreement CMS CITES Regional fisheries management conventions
Minerals Development Physical destruction Pollution Sediment plumes & turbidity Noise	UNCLOS and 1994 Part XI Agreement International Seabed Authority rules and Regulations
Shipping Pollution Alien species Noise Physical impacts (whales) Marine debris	UNCLOS Numerous IMO conventions, including: MARPOL 73/78 SOLAS Ballast Water & Sediments IMO measures: PSSAs & Compulsory Pilotage
Bioprospecting Physical destruction Potential large-scale harvesting	UNCLOS
Marine Scientific Research/Hydrography Physical destruction	UNCLOS Antarctic Treaty
Submarine Cables Physical destruction	UNCLOS
Dumping Pollution Physical (smothering)	UNCLOS London Convention and 1996 Protocol Regional Seas Conventions/protocols/annexes
Renewable Energy (e.g., OTEC, currents, wind turbines)	UNCLOS IMO Conventions (e.g., MARPOL 73/78)
Open Ocean Aquaculture Pollution Disease Escape of alien or genetically-modified species	UNCLOS IMO Conventions (e.g., MARPOL 73/78, vis-à-vis fixed or floating platforms at sea)
Large-Scale Ocean Modification (e.g., ocean fertilization/CO2 sequestration)	UNCLOS
Marine Archaeology Physical destruction Physical (smothering)	UNCLOS UNESCO Underwater Cultural Heritage
Tourism Physical destruction Light pollution Noise	UNCLOS

* In areas beyond national jurisdiction, the Convention on Biological Diversity creates general obligations for States Parties to individually apply relevant Convention provisions to activities and processes under their jurisdiction or control and to cooperate with other States in the conservation and sustainable use of biodiversity. It does not regulate these activities *per se* beyond national jurisdiction.

Threats/activities	*Major legal instruments*
Land-Based Activities (e.g., Mediterranean high seas; effects of POPs)	UNCLOS Regional seas conventions/protocols/annexes

Annex VI

AREAS OF HIGH BIODIVERSITY IDENTIFIED IN THE SCIENTIFIC STUDY AND THE LEGAL INSTRUMENTS THAT COULD BE USED TO PROTECT THEM

Areas of high biodiversity	*Existing legal instruments*
The marine areas beyond national jurisdiction of the Indo-Pacific, specifically centered on SE Asia, Northern Australia and the Tasman Sea *Type of biodiversity of particular concern:* - Seabirds & other non-fish marine vertebrates - All species included in the study - Seamounts	- **All global instruments** covered here apply, though (except for IMO instruments and International Whaling Convention) contain only general provisions - In the **Southwest Pacific**, measures applicable to **seabird protection** adopted by the two **RFMOs** in the region, and pursuant to **CMS Agreement on albatrosses and petrels**. The two RFMOs in the region function under the **conventions on Western and Central Pacific highly migratory species (WCPFC) and southern bluefin tuna (CCSBT)** - For the **Tasman Sea**, **WCPFC** and **CCSBT** function, as well as **CMS/ACAP** - For the **Indian Ocean**, **RFMOs** function under the **Agreement for the Establishment of the Indian Ocean Tuna Commission (IOTC)** and **CCSBT**. - For the **Western Pacific**, **Western Pacific**, the **South Pacific Regional Seas convention** applies to high seas areas surrounded by the Parties' EEZs.
Seamounts beyond national jurisdiction in the North and South Atlantic, and the Southern Ocean convergence zone. These areas are especially significant since protection of seamounts and surrounding areas will more than likely also protect cold-water corals *Type of biodiversity of particular concern:* - Seamounts - Cold-water coral reefs	- **All global instruments** covered here apply, though (except for IMO instruments and International Whaling Convention) contain only general provisions - **MARPOL 73/78 Special Area** status in the Southern Ocean would appear to reduce some types of pollution as a source of impact on biodiversity - **For Northeast Atlantic:** Northeast Atlantic Fisheries Convention, the Regional Seas Agreement for the Northeast Atlantic -**For Northwest Atlantic:** Northwest Atlantic Fisheries Convention - **For Southern Ocean:** Protective measures for **fishing impacts** are available under **CCAMLR**. The **Antarctic Treaty** also applies for seamounts within the treaty area - Some seamounts in the **Eastern Pacific** may fall into the are of the **Inter-American Tropical Tuna Commission (IATTC)**, but some appear to be outside. - For seamounts in the **Western Pacific**, the **South Pacific Regional Seas convention** applies to high seas areas surrounded by the Parties' EEZs.
Marine areas beyond national jurisdiction adjacent to islands in the Southern Ocean *Type of biodiversity of particular concern:* - Marine mammals	- **All global instruments** covered here apply, though (except for IMO instruments and International Whaling Convention) contain only general provisions - **MARPOL 73/78 Special Area** status in the Southern Ocean would appear to reduce some types of pollution as a source of impact on biodiversity - The **Whaling sanctuary** in the Indian Ocean would appear to be relevant to biodiversity protection

Areas of high biodiversity	*Existing legal instruments*
Small shelf areas beyond national jurisdiction in the Northeast and Northwest Atlantic *Type of biodiversity of particular concern:* - All marine species, particularly fish	- **All global instruments** covered here apply, though (except for IMO instruments and International Whaling Convention) contain only general provisions - **For Northeast Atlantic:** Northeast Atlantic Fisheries Convention, the Regional Seas Agreement for the Northeast Atlantic , and the CMS Agreement on small cetaceans of the Baltic and North Seas (ASCOBANS) -**For Northwest Atlantic:** Northwest Atlantic Fisheries Convention

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