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LAW OF THE SEA

Report of the Secretary-General

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INTRODUCTION

1. The present report is submitted to the General Assembly in response to its resolution 45/145 *in* which the Secretary-General was requested, inter alia, to report on developments pertaining to the United Nations Convention on the Law of the Sea and all related activities on the implementation of that resolution. Other reports have been prepared at the request of the general Assembly: a second report on the realisation of benefits under the United Nations *Convention* on the Law of the Sea in regard to development and management of ocean resources (A/46/722) prepared pursuant to General Assembly resolution 45/145 and a report on large-scale driftnet fishing and its impact *on* the living marine resources of the world's oceans and seas (A/46/615 *and* Add.1). The present report should be complemented by the above-mentioned reports.

2. The Convention provides the indispensable foundation for the conduct of States in all aspects of ocean space, its uses and resources, to such an extent that it has now become possible for States actively and confidently to consider building on its single and authoritative basis, *recognising the* dynamic nature of international legal development. The unique role and etatus of the Convention is also a central consideration in facing issues where maritime and coastal State interests may conflict, and where the individual exercise of sovereign and jurisdictional rights *may* impinge upon the rights of the international community, as is becoming more evident in the field of marine environmental protection and conservation. Indeed, rule-making and standard-setting activities by international organisations will be enhanced by the *entry* into force of the Convention. Issues relating to interpretation and application of the Convention may be expected to arise as States *seek* to resolve differences of national interest when organizing regional or subregional cooperation, *and* cooperative arrangements with respect to marine environmental protection and the management and conservation of resources.

3. States have consistently, through national and international legislation, and through related decision-making at bilateral, regional and global levels, demonstrated or asserted the authority of the Convention as the pre-eminent international legal instrument on all matters within its purview. Such assertions have sometimes been prompted by concerns as to the potential for *erosion* of the basic rules of the Convention which reflect a delicate balance between the rights and duties of States in the maritime area. As ocean uses evolve and, with them, perceptions of national security and developmental and environmental protection needs, it becomes all the more necessary to preserve this balanae.

4. A major new commitment is required to bring common cause to bear on the future of the Convention. Greater certainty is undoubtedly required for the effective implementation of ocean-management regimes, including particularly the closely interrelated regimes for international navigation, resource management and conservation, marine environmental protection, and also the promotion and conduct of marine scientific research. Selective application of

Convention provisions, on the one hand, and the inconsistent and/or unbalanced application of the regime, on the other, will pose yet greater threats to the support for and the stability offered by the Convention, In consolidating the gains made by the international community in successfully concluding this Convention, entry into force remains an important atep. However, this cannot and should not be regarded as an end in and of itself. The ultimate goal must be to achieve the widest possible participation and acceptance of the Convention.

5. Since its inception in 1984, the annual report of the Secretary-General on the Law of the Sea has sought to present the most relevant developments and to identify important trends. Special, additional reports have also been prepared in recent years at the request of the General Assembly,

6. Closer attention needs to be given to all relevant developmonts in international law and policy and to the national practice of States, preferably through a more *effective* monitoring mechanism which permits consultation and exchange of views. In this respect the initiatives taken by the Office for Ocean Affairs and the Law of the Sea to convene various expert groups (on baselines in 1989, on the marine scientific research consent regime in 1990, and on the high-seas fisheries regime in 1991) have been considered an important contribution.

PART ONE

DEVELOPMENTS RELATING TO THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

I. STATUS OF THE CONVENTION

7. The 1982 United Nations Convention on the Law of the Sea received a total of 159 signatures before the period for signature closed on 9 December 1984. It will enter into force 12 months after the date of deposit of the sixtieth instrument of ratifioation or accession. As at 20 November 1991, 49 instruments of ratifioation and 2 of accession (a total of 51) have been deposited with the Seoretary-General, as follows: Angola, Antigua and Barbuda, Bahamas, Bahrain, Belize, Botswana, Brazil, Cameroon, Cape Verde, Côte d'Ivoire, Cuba, Cyprus, Djibcuti, Dominica, Egypt, Fiji, Gambia, Ghana, Grenada, Guinea, Guinea-Bissau, Iceland, Indonesia, Iraq, Jamaica, Kenya, Kuwait, Mali, Marshall Islands, 1/ Mexico, Micronesia (Federated States of), 2/ Namibia, Nigeria, Oman, Paraguay, Philippines, Saint Lucia, Sao Tome and Principe, Senegal, Seychelles, Somalia, Sudan, Togo, Trinidad and Tobago, Tunisia, Uganda, United Republic of Tanzania, Yemen, Yugoslavia, Zaire and Zambia.

II. STATE PRACTICE AND NATIONAL POLICY

A. State practice

8. The major impact of the Convention has been on the delimitation of maritime jurisdictional zones. Currently 133 States have established territorial seas not exceeding 12 miles, 33 States have adopted a 24-mile contiguous zone and 82 States have proclaimed a 200-mile exclusive economic zone. Sixteen States have claims to 200 miles exalusfve fishery zones. The maritime claims all accord with the limits prescribed in the Convention on the Law of the Sea.

9. Poland has now enacted a general maritime law (July 1991) which, inter alia, converts its previous exclusive fishery zone into an exclusive economic zone (EEZ), joining the USSR as the only other State with an EEZ in the Baltic. *Sweden* is in the process of developing legislation, while Denmark, Finland and Germany continue to maintain exclusive fishery zones. The Polish law calls for a multiple-use and integrated approach to resource management, and is generally in conformity with the Convention.

10. The recent Polish law contains a number of clauses which may serve to illustrate several possible trends in EEZ and territorial-sea legislation as concerns the balance between maritime and coastal State interests - trends which do not strictly conform with the Convention. The legislation requires that only "wilful" pollution, rather than "wilful and serious" pollution, would render passage non-innocent) it maintains a requirement of a

pre-•rirting law calling for prior authorization for the passage of foreign warships; it reaffirms the power to designate areas closed to navigation and fisheries within the territorial sea for security reasons, while adding the authority to designate areas dangerous for navigation or fisheries beyond the territorial sea.

11. &other area that has been positively affected by the adoption of the Convention is the passage of ships in the territorial sea or through straits used for international navigation. The provision8 of the Convention relating to this matter have been incorporated into the legislation cf many coastal States. An example of important legal action taken by States, in connection with the ap;lication of the provisions of the Convention relating to the rules of innocent passage, is contained in the Joint Statement by the United States of America and the Union of Soviet Socialist Republics concerning a Uniform Interpretation of Rules of International Law governing Innocent Passage, signed on 23 September 1989. This instrument unequivocally declared that the relevant rules of international law governing innocent passage of ships in the territorial sea were those contained in the Convention on the Law of the Sea. 3/

12. With regard to transit passage through straits used for international navigation embodied in the Convention, it has been remarked that, although compliance has not been universal, the rules have made an important contribution to the stability of the regime.

13. The United States and the Soviet Union are currently preparing *for* talks concerning "objective criteria for determining straight baselines and historic bays". The intention is to establish criteria which are consistent in every respeot with the Convention.

14. The Convention was primarily designed to reflect the law of the sea in time of peace. However it has, as was to be expected, influenced the law of naval warfare, in particular, the rules of neutrality. The establishment of a 12-mile territorial sea and the creation of precise rules for innocent passage, transit passage and archipelagic - sealanes passage have contributed to the clarification of the rights and duties of neutral States and those of *belligerent* forces. It has been noted that these rules assumed *some* importance in the context of the Gulf War. 4/

B. Initiative of the Secretary-General

15. In his report to the forty-fifth session of the General Assembly the Secretary-General informed the General Assembly of his initiative to convene informal consultations aimed at achieving universal participation in the 1982 United Nations Convention on the Law of the Sea. The Secretary-General had noted that, while he continued to encourage all States that have not done so to ratify or accede to the Convention, it had to be recognised that the problems on certain aspects of the deep-seabed mining provisions of the Convention have inhibited some States from ratifying or acceding to it, He

was of the view that these problems have to be addressed. He had further noted that eight years had elapsed since the Convention was adopted and that during that period a number of important political and economic changes had taken place, some directly affecting the deep-seabed mining provisions of the Convention, others affecting international relations in general; in particular, that the prospect for commercial mining of deep-seabed minerals had receded into the next century and that this was contrary to what was expected at the time when the Convention was being negotiated. These factors will of necessity have to be taken into account in the examination of the problems that may exist with respect to the deep-seabed mining provisions of the Convention.

16. The Secretary-General explained that the purpose of these consultations was to respond to the invitation of the General Assembly issued to all States to make renewed efforts to facilitate universal participation in the Convention and, at the same time, to facilitate the successful completion of the work of the Preparatory Commission.

17. During 1991, the Secretary-General continued with his informal consultations in the course of which nine issues relating to the regime for deep-seabed mining, as contained in the Convention, were identified as problem areas for some States: costs to States Parties; the Enterprise; transfer of technology; production limitation; compensation fund; financial terms for contracts; decision-making) environmental considerations; and the Review Conference.

18. Participants agreed to examine each of these issues with a view to identifying areas where broad agreement existed and those that would require further examination. The examination of these issues was based on an information note, prepared by the Secretariat, which raised the questions that needed to be addressed and suggested possible approaahes towards resolving them, The issues relating to the costs to States Parties; the Enterprise; decision-making8 the Review Conference8 and transfer of technology have already been examined. Considerable progress has been made towards achieving broad agreement on these issues. The Secretary-general is encouraged by the positive and constructive responses from States on the suggestions for possible approaches that might be taken to resolve *these* issues. He is of the view that these consultations have provided a good basis on which an agreement satisfactory to all States can be achieved.

19. The remaining four issues, namely, production policy; compensation fund; financial terms of contracts; and environmental considerations are to be examined during December 1991,

20. After all the issues have been examined, the Secretary-General intends to summarize the results of the entire consultations in a statement. He also wishes to widen the participation in these informal consultations in order to enable all interested States to take part in them.

III. SETTLEMENT OF CONFLICTS AND DISPUTES

A. Delimitation agreement

Trinidad and Tobago/Venezuela

21. In April 1990, after many years of negotiation the two countries concluded a Treaty on the Delimitation of the Marine and Submarine Areas, which provides for a single maritime boundary. It establishes a single maritime boundary with respeot to the territorial sea, aontinental shelf and the exclusive economic zone. It is significant that this Treaty has modified the line delimiting the submarine area established by the 1942 Gulf of Paria Treaty in the Serpents Mouth and along parts of the Colombus Channel. It also makes provision for the related issue of petroleum and other mineral resources which may extend across the delimitation line, and calls for agreement on the manner of exploitation and the apportionment of costs and benefits which, it may be noted, is the almost universal practice for maritime boundaries agreements concerning the continental shelf. The Treaty also requires the Parties to adopt all measures for the preservation of the marine environment within their respective areas and to exchange pertinent information and notify each other of any pollution threat in the maritime zone.

22. This Treaty is in keeping with several maritime delimitation agreements already aonaluded by the continental States of the Caribbean region. It is multi-purpose in the sense that it is not solely concerned with delimitation. It also seeks to facilitate cooperation between the Parties with respect to the protection and preservation of the marine environment and the preservation of the freedom of navigation. 5/

23. Venezuela and Trinidad and Tobago exchanged instruments of ratification on 23 July 1991. By an exchange of notes it was made clear that the words "zonas en reclamación", which appeared on the map attached to the Treaty, should not be interpreted as implying endorsement by the Government of the Republic of Trinidad and Tobago of the claim by the Government of the Republic of Venezuela to the area indicated. This was designed to protect the position of Trinidad and Tobago with respect to the boundary dispute between Guyana and Venezuela.

B. Joint development

24. The trend towards creation of joint development zones for exploration and exploitation of mineral resources also continues, particularly in cases where they *can* serve as provisional measures or otherwise circumvent potentially disruptive overlapping claims. The concept has been born out of the realisation that unresolved boundary problems may last for an indefinite period, preventing investment in the offshore mineral sector. Thus, the joint development zone has enabled a number of countries to benefit from the resources, without prejudice to the boundary issue. The value of such zones is also recognized in agreements which serve the primary purpose of delineating

maritime boundaries, by making specific provision for the possibility of future joint development.

1. Australia/Indonesia

25. A first meeting of the Ministerial Council, established by the 1959 Timor-Qap Treaty, has taken place and steps are being taken by Australia and Indonesia to set up the offices of the Joint Authority; bids will be called for the first exploration permits to be awarded under the production-sharing approach adopted. Negotiations on the delimitation of the continental shelf in the Timor-Qap area have been started. The two countries are also increasing their cooperation on fisheries matters based on a Memorandum of Understanding regarding a provisional boundary between their respective fishery zones.

2. Malaysia/Thailand

26. The Agreement on Constitution and Other Matters relating to the Establishment of the Malaysia-Thailand Joint Authority *(signed* on 30 May 1990) is now in forae (29 January 1991) and steps are being taken to establish the Authority. The Agreement, which represents more than 11 years of *negotiation,* implements their 1979 Memorandum of Understanding on the establishment of a joint authority for the exploitation of the resource8 of the seabed in a defined area of the continental shelf of the two countries in the Gulf of Thailand.

27. The Joint Authority assumes all rights and responsibilities for the exploration and exploitation of mineral resource8 in the designated area for a period of 50 *years.* If the Parties resolve the problem of the delimitation of the boundary of the continental shelf before then, the Authority shall be wound up and a new arrangement concluded, if both so decider if no solution is found in that time, the arrangement will continue. The Agreement further provides that, if any other area of interest is discovered which extends beyond the present limits *of* the defined area, the Authority and the Parties shall *seek* to reach agreement *on* its exploitation.

25. Similar to the 1959 Timor-Qap Treaty, the Agreement uses a production-sharing system of licensing) also, rights conferred or exercised by either Party in matters of fishing, navigation, hydrographic and oceanographic surveys, prevention and control of marine pollution and other matters including enforcement powers extend to the zone and such rights must be *recognised* by the Joint Authority.

C. Settlement of disputes

1. Maritime boundaries disputes

(a) Guinea-Bissau v. Senegal

29, On 12 November 1991, the International Court of Justice delivered, in the case concerning the Arbitral Award of 31 July 1989 (Guinea-Bissau v. Senegal), a judgment by whiah it rejected the submission of Guinea-Bissau that: (i) the Award of 31 July 1989 is inexistent; (ii) subsidiarily, it is absolutely null and void, (iii) the Government of Senegal is not justified in seeking to require Guinea-Bissau to apply the Award. The Court found, on the submission to that effect of Senegal, that the Award is valid and binding for both States, which have the obligation to apply it.

30. The Court took note of the fact that, on 12 March 1991, Guinea-Bissau filed in the Registry of the Court a second application requesting the Court to adjudge and declare "What should be, on the basis of the international law of the sea and of all the relevant elements of the case, inaluding the future decision of the Court in the case concerning the Arbitral Award of 31 July 1989, the line (marked on a map) delimiting the whole *of* the maritime territories appertaining respectively to guinea-Bisaau and Senegal." The Court also took note of the declaration by Senegal in which one solution "would be to negotiate with Senegal, which has no objection to this, a boundary for the exclusive economic zone or, should it prove impossible to reach an agreement, to bring the matter before the Court". The Court considered it highly desirable for the elements of the dispute not settled by the Arbitral Award of 1989 to be resolved as soon as possible as both Parties desire (International Court of Justice Communique, 12 November 1991).

(b) Qatar v. Bahrain

31. Qatar filed an application on 8 July 1991 based on Article 36 (1) of the Court's Statute, requesting the Court to adjudge and declare in accordance with international law that the State of Qatar has sovereignty over the Hawar Islands and that it has the sovereign rights over Dibal and Qit'at Jaradah shoals. The Court was also requosted, with due regard to the line dividing the seabed of the two States described in the United Kingdom decision of 23 December 1947, to draw in accordance with international law a single maritime boundary between the maritime areas of seabed, subsoil and superjacent waters appertaining respectively to the State of Qatar and the State of Bahrain. 6/

(c) Denmark v. Norway

32. The Court has not yet delivered judgment in the case concerning Maritime Delimitation in the Area between Greenland and Jan Mayen.

(d) El Salvador v. Honduras

33. The Chamber of the Court is still seized of *the* case concerning the Land, Island and Maritime Frontier Dispute (El Salvador v. Honduras). It will be recalled that the Chamber delivered a Judgment on the Application by Niaaraqua for permission to intervene. 7/

(e) Canada v. France (St. Pierre and Miquelon)

34. The 1959 Agreement Establishing a Court of Arbitration for the Purpose of Carrying Out the Delimitation of Maritime Areas between France and Canada, has now been put into effect.

35. The islands of St. Pierre and Miquelon are situated close to Newfoundland, creating disagreement over fishing rights in the large area of overlapping claims. The resources have clearly been heavily fished, and the situation has been aompliaated by scientific disagreement over the health of stoaks in the disputed waters and the amount of fish that could be harvested safely. There is also hydroaarbon potential in the disputed zone although this has not yet been fully assessed; some exploration permits that have been issued overlap.

36. The arbitral tribunal has been requested to conetruot in accordance with the applicable prinoiples and rules of international law, a single maritime boundary. The Trlbunal held public hearings in New York from 29 July to 26 August 1991 and is expected to hand down the award during the early part of 1992.

2. Other disputes

(a) Passage through the Great Belt (Finland v. Denmark)

37. Finland instituted proceedings at the International Court *of* Justice on 17 May 1991 against Denmark in respect *of* the dispute which arose out of Denmark's project to construct a fixed bridge over the East Channel of the great Belt, one of three straits used for international navigation linking the Baltic and North Seas. The bridge, it was claimed, would have the effect of closing permanently the Baltic for deep draught vessels of over 65 metres in height, thus preventing in particular the passage of drill ships and oil rigs manufactured in Finland. Finland requested the Court to rule inter alia that there is a right of free passage through the Great Belt for al?. ships going to and from Finnish ports and shipyardsr that this right extends to drill ships, oil rigs and reasonably foreseeable ships; and that the planned bridge would be incompatible with this right. Finland stated that its drillships and oil rigs have exercised passage rights through the Great Belt since 1972 and that currently many of them exceed 65 *m* in height. Finland also requested an indication of provisional measures (23 May 1991), ordering Denmark to refrain from continuing with related construction works.

38. Denmark asserted that Finland was alone in protesting the project, despite repeated diplomatic notif ication. It pointed to fixed bridges that

span other important waterways and concluded that State practice indicated that 65 metre height is sufficient for the exercise of free passage guaranteed under international law. Denmark har argued, in effect, that the rights of merchant ships wore not intended to extend to future vessels of unforeseeable size such as oil rigs and platforms of greater height than 65 metres.

39. On 29 July, the Court unanimously found that circumstances were not such as to require the indication of provisional measures in the case concerning Passage through the Great Belt.

(b) East Timor (Portugal v. Australia)

40. The Government of Portugal has consistently lodged diplomatic protests with Australia, with specific reference to the 1989 Treaty on the Zone of Cooperation in an Area between the Indonesian Province of East Timor and Northern Australia 8/ which *entered* into force on 11 February 1991, and *to* negotiations on *the* delineation of the continental shelf in that zone ourrently being conducted by Australia and Indonesia. 9/ On 22 February 1991 Portugal submitted an appliaation to the International Court against Australia regarding certain actions undertaken by that country related to East Timor concerning the so-aalled Timor-Qap. In its note verbale addressed to the Secretary-General Portugal stated that "the application foouses mainly on the opposability to Australia of the right of the people of East Timor to self-determination and of Portugal's capacity as the administering Power of that Non-Self-Qoverning Territory. Through that appliaation Australia's international responsibility is claimed." 10/ Portugal has noted that the 1969 Treaty is presented as a provisional arrangement of a practical nature, relating solely to the development of hydroaarbon resources, but that it also makes provision for and regulates certain aats of exercise of jurisdiction. Portugal asserts the right to self-determination *of* the people of East Timor and its own status as the administering Power, and olaims that Australia has failed to oomply with its obligation to negotiate with it. Portugal specifically requests that Australia cease its efforts with Indonesia concerning delimitation and resource development, and generally refrain from exercising jurisdiction over the continental shelf in the area of the Timor-Qap. 11/

IV. OTHER DEVELOPMENTS RELATING TO THE LAW OF THE SEA

A. Peace and security issues

41. Regional and international peace and security are increasingly more broadly defined in terms of the factors involved, perhaps most particularly as they relate to the maritime domain, where sovereign rights and exclusive jurisdiction over resources and environmental protection interest8 are frequently perceived as touching also on individual and collective security interests. Participation in the Convention and its entry into force of the Convention could do much to limit the occurrence, scope and content of conflict, whether by resolving legal points of dispute, by activating the many

mechanisms for aooperation whioh it mandates, or by offering access to its comprehensive system for settling disputes,

42, It is generally accepted that a number of key provisions of the Convention, particularly those dealing with the passage of ships, aontribute direatly to conflict avoidance and thus to oonfidenae-building in the maritime domain. 12/ On the other hand, ensuring the primary "peaceful uses" purpose of the Convention *and* the orderly applioation of its rules on rational management and sustainable development requires that continuing efforts be made to develop confidence-building measures (CBMs).

43. Speaifia proposals have been made relative to various regions that States should sign and ratify the Convention on the Law of tho Sea, in order to convey a normative value as well as to provide a mechanism for *the* settlement of disputes. 13/

44. Meetings of States of the zone *of* peace and aooperation of the South Atlantic have, since their inception, paid particular attention to law of the sea issues and the development of national maritime policies. The recent meeting *of* the Group of Experts (April 1991) recommended that member States that had not done so should consider ratifying the Convention and developing a regional system of information on *law* of the sea and marine affairs. It also proposed bilateral and subregional attention to enforcement measures *for* marine environmental protection and measures to avoid negative environmental impacts on straddling stocks. 14/

1. Prevention of naval incidents at sea

45. On 19 June 1990, the USSR concluded with the Netherlands an Agreement on Incidents at Sea beyond the Territorial Sea, similar agreements having been concluded with the United States (1972), the United Kingdom (1986), *France* (1989), Canada (1989) and Italy (1989). While the most recent agreement recognizes that the basic provisions are the International Maritime Organisation (IMO) Collision Regulations, it contains some supplementary rules, e.g. that formations will not manoeuvre through areas with dense shipping traffic, in sea lanes and traffic separation schemes. The desirability *of* such was strongly emphasized by past consultations held within the United Nations Disarmament Commission. It also establishes a system of prior notification *of* actions constituting a threat to the safety of navigation or aviation. 15/

46. The latest Joint Statement by the United Kingdom and Argentine governments (25 September 1991) dealing with reciprocal information and consultation, maritime and air search and rescue, and safety of navigation, includes as confidence-strengthening measures, prior notification of naval or air movements carried out within 80 miles of coasts and mutual agreement for any movement closer than 15 miles. 16/

47. Expansion of the areas of application of existing agreements on mutual restraint in naval operations may well eventuate, as indicated by the interest

of the United States in helping to create a North-East Asian cooperative security system, based inter alia on multilateral application of the provisions of the 1972 United States/USSR Agreement to the seas and air of a designated geographic zone. 17/

48. Incidents-at-sea agreements have also been proposed for the South China Sea and South-East Asian region generally, beginning on a bilateral basis, in keeping with an approach recommended by the United Nations seminar at Kathmandu that bilateral oonfidence-building measures in the region would be highly appropriate. It has been further recommended that such measures should concentrate on border agreements dealing, inter alia, with security questions, piracy and illegal fishing. Given the potential for incidents arising from fisheries enforcement activities, analogous to those arising from naval exercises, various forums have urged information sharing on the offensive capabilities of the vessels deployed, as well as the extension of regional or subregional cooperation arrangements on enforcement. Such recommendations are also made directly by regional fisheries organizations.

2. The passage of nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances

49. This is one example of a law of the sea issue (see article 23) which has been cited for further legal development, in the interesta also of maritime oonfidenoe-building. It may be noted that IMO is developing a Code for tha safe carriage of irradiated nuclear fuel and, with the International Atomic Energy Agency (IAEA), is assessing future possibilities regarding the use of civilian nuclear-powered ships, to determine whether the present Code of Safety for Nuclear Merchant Ships would be adequate in its coverage and its reflection of nualuar safety technology. 18/ IAEA reports that some 9 civilian nualear-powered vessels have been commissioned, and that there are some 575 nuclear-powered naval vessels, about 510 being submarines. Sea transport of nuclear materials is common practice for materials within the nuclear fuel cycle. In addition, sealed radiation sources are used widely in the marine environment in navigation aids and in association with engineering, construction, and oil and gas prospecting and extraction.

50. In the context of the review being conducted for Parties to the London Dumping Convention (LDC) on the overall question of the management of low-level radioactive wastes, IAEA has reported on incidents, both confirmed and unconfirmed, which have involved nuclear materials, 19/ Continuing developments with respect to the maritime law aspects of the transboundary movement of haaardous wastes and radioactive wastes can also be expected to contribute to the development of a special regime under article 23 of the Convention.

B. Protection and preservation of the marine environment

1. The role of the Convention on the Law of the Sea

51. Attention is drawn to the 1989 Report on Protection and Preservation of the Marine Environment (A/44/461 and Corr.1), which will be updated and expanded upon in a second report to be issued early in 1992, As emphasised in that report, the Convention is itself an instrument for environmentally sustainable development, and must be read as a whole. This is essential, not only to appreciate the balance of rights and obligations achieved in the Convention, which serve to demonstrate that a State's security, economic and environmental interests are compatible, but also to take account of the reliance placed on global and regional cooperation as regards also marine scientific research and the development and transfer of marine technology. 20/

52. The Convention places States under the responsibility to protect and preserve the marine environment, and thus to prevent, reduce and control all sources of marine pollution; and it ensures that the measures taken give due regard to legitimate uses of the marine environment, It imposes unprecedented obligations upon States with respect to marine pollution that may arise from activities under their jurisdiction or control, particularly as regards the degree of oooperatlon called for at regional and subregional levels to ensure harmonised policies and maximum uniformity and standardisation of environmental regulation. The Convention does not and could not provide all of the specific details; rather it is a basic framework that other global, regional or subregional agreements must respect.

53. There is a large body of existing international law on protection and preservation of the marine environment, global and regional, supported by the basic framework contained in the Convention, which together far exceed any other component of international environmental law, Nevertheless, the marine environment and its resources continue to experience serious and growing degradation. It is of paramount urgency that existing agreements and instruments be widely accepted and fully complied with, and that outstanding problems be dealt with. Important efforts are being made by international organisations in this regard, particularly by IMO in its *efforts* to strengthen mechanisms for promoting and ensuring compliance with its Conventions and instruments, and by the United Nations Environment Programme (UNEP), in reviewing the successes and failures of its Regional Seas Action Plans and Conventions. Questions as to the extent that principles and rules of international law can be developed to deal with the dominant source of marine pollution - that which comes directly *from* the land and via the atmosphere - is finally receiving world attention, beginning with the *task* of outlining a global strategy and plan of action, with a particular focus on regional components. 21/

54, It is readily apparent that there is a continuous need to balance potentially conflicting uses and interests, including navigational rights and environmental protection interests. Trends in this regard are discussed below. Also discussed are the current efforts to improve compliance with international conventions on maritime safety and pollution prevention.

55. Environmental considerations are an increasingly important factor for world fisheries, which are already struggling to deal with the impacts of the serious pressure on resources and mounting competition over fishing rights. Major adjustments and improvements in national and international management and conservation regimes are indicated, as well as the need for a strong commitment to responsible fishing practices. Several trends, including the phenomenon of large-scale pelagic driftnet fishing, have combined to underline the need for international consultations with particular reference to the legal regime for high seas fisheries. Relevant developments are discussed in section IV,

2. Navigation and marine environmental protection

56. State practice shows a strengthening of coastal State powers, particularly as regards pollution combating operations and intervention measures in the EEZ, and also to some extent ac regards the protection of the marine environment in general. IMO is conscious that coastal States may feel a growing need for having more power with respect to the numerous smaller maritime incidents, in order, for example, to improve opportunities for claiming costs of clean-up whiah is not at present covered under Intervention Convention and Protoaol. It may be *noted* that the Marine Environmental Protection Committee (MEPC) has adopted 22/ a revised list of substances annexed to the 1973 Protocol Relating to Intervention on High Seas in Cases of Marine Pollution by Substances Other than Oil; and will now proceed to study in detail the criteria for identifying substances. These however, as has been affirmed by MEPC, would be subordinate to certain prerequisites, namely, that a coastal State can only intervene if there is grave and imminent danger from pollution or threat of pollution, if there is some relationship between the casualty and the damage, and if major harmful consequences are reasonably expected. It is *none* the less being queried whether the rather high thresholds *of* present international law with respect to emergency response at sea, particularly as regards intervention, may need to be lowered, not *so much* in the interests of the economic interests of coastal States, as in favour of the protection of the marine environment.

57. It *may* also be noted that IMO is being asked to respond to an increasing number of proposals as concerns mandatory ship reporting, especially for ships entering zones established to *control* ship traffic, including areas which extend beyond the territorial sea. It has been argued that such a measure would be analogous to reporting requirements under Protocol I to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) for ships carrying oil or dangerous substances, and would give the flag States the means of taking action against infringments outside territorial waters. 23/ Opinions have been expressed that under certain cirumstances, maritime safety would be enhanced by mandatory reporting schemes in international waters, especially in the case of environmentally vulnerable areas, and for ships carrying harmful cargoes. International criteria for the designation of such mandatory schemes, as well as procedures, would have to be first developed by IMO.

58. Basic issues as to navigational rights have been confronted in other contexts also, e.g. in the preparation of the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances which came into force on 11 November 1990 and the 1988 Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, as well as of the 1989 Basel Convention on the Transboundary Movements of Haaardous Wastes and the 1990 Protocol on Protected Areas of the Wider Caribbean Region. 24/ In several instances, States have made declarations and entered objections pertaining to navigational rights, including statements on such specific issues as prior notification. 25/ Also to be noted is the inclusion of a footnote on navigational rights in respect of the provision of the 1990 IAEA Code of Practice on International 'Transboundary Movement of Radioactive Waste concerning the sovereign right to prohibit transboundary waste movements. 26/ While generally acceptable formulations have been found in most asses, fundamental concerns persist and warrant close and urgent attention from the international law of the sea community.

59. It may be noted that similar issues have arisen in the domain of search and rescue operations also. The IMO Legal Committee was recently requested to consider the legal basis for a right of assistance entry with prior notification into the territorial seas and archipelagic waters of foreign aoastal States in order to render assistance to persons, ships or aircraft in danger or distress. The conclusion reached was that there was a duty to render assistance to save human life, and that the matter of a right of entry should be dealt with in bilateral or regional agreements; there was, however, no such right presently in international law, conventional or customary. It may be noted that many delegations further emphasised that it was important not to upset the delicate balance between the duty to render assistance and the sovereign right of coastal States to control entry into and operations in their waters. 27/

60. The above issues essentially revolve around the comparative powers and responsibilities of flag States, port States and coastal States, and the impact of designating marine protected areas and creating a distinct regime for the maritime transport of hasardous wastes.

(a) Ships and marine protected areas

61. The problems of navigation and pollution prevention come together, particularly with the finalisation of the IMO Guidelines for the designation of special areas and the identification of particularly sensitive areas, which are before the next Assembly for adoption. 28/ It is noteworthy that the IMO Council is aware of the effeot on international law that designation of "particularly sensitive *areas"* and resulting restrictions on traditional freedom of passage may have and that it has expressed the view that this matter and other decisions of a similar character merit careful study and consideration by the Organisation as a whole (C 66/D, pars, 7.4).

62. The distinction between a special area and a particularly sensitive sea area is made as follows: A special area is a sea area where for recognised technical reasons in relation to its oceanographical and ecological condition

and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required; a particularly sensitive area is an area whiah needs special protection through action by IMO because of its significance for recognised ecological or sooio-•aonomio or scientific reasons and whiah may be vulnerable to damage by maritime activities.

63. The Guidelines remind that a MARPOL special area is large, in order to ensure a clear distinction from high-seas discharge criteria; indeed, every existing area is a semi-enclosed sea in the oceanographic sense. The number of Spools1 Areas under MARPOL 73/78 Annexes has expanded considerably in the last two years, however, they can only become effective when adequate port-reception facilities are available. 29/ The new Guidelines on designation provide greater detail as oompared to the existing MARPOL definition.

64. The role of the Convention is discussed in the Guidelines, noting that there are some important differences between its provision and the aonoept *of* Special Areas under MARPOL 73/78: in article 211 (6)(a) of the Convention on the Law of the Sea, the onus is on the coastal State to define area-specific measures and then submit them to IMO for approval) whereas the requirements *for* Special Area status under MARPOL are defined in the respective annexes. It is further noted that the LOS definition refers to utilisation or protection of the resources *of* the area in question, and thus anticipates a broader range of measures than is currently the case with MARPOL Special Areas. 30/

65. While the Guidelines recognise that marine protected areas may be designated within territorial seas, and beyond, the warning is also given that protective measures affecting shipping oannot be taken unilaterally, since "principles suoh as freedom of navigation (in international waters) and the right *of* innocent passage (in territorial waters) may be applicable", 31/

66. The Guidelines accord an important role to the various ships' routeing measures whioh *were* originally designed to respond to navigational haaards, e.g. areas to be avoided, precautionary areas, and vessel traffic services (VTS) including compulsory pilotage, and note that, with the exception *of* traffic separation schemes, 32/ all other routeing measures are recommendatory. The use of VTS is recommendatory in international waters. The most far-reaching measure is an "area to be avoided", namely, an area with defined limits in which navigation is particularly hazardous or where it is exceptionally important to avoid casualties and thus should be avoided by all ships or certain classes of ships. In view of earlier concerns over the possible proliferation *of* areas to be avoided, a new procedure was introduced for the consideration of proposals to involve both the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC). 33/ IMO has established 16 areas to be avoided, several specifically so as to provide additional environmental protection and they are currently under cons lderation. The Buffer Zone concept, used in the guidelines on particularly sensitive areas, had also raised concerns as to their use to limit operational discharges on a broad scale. Thus, the above routeing measures may be applied in a buffer zone, provided this is imperative for the protection of the area itself against damage *from* maritime activities.

(b) Maritime transport and disposal of hazardous wastes

67. It will be recalled that resolutions 2 and 7, adopted together with the 1989 Basel Convention on the Transboundary Movement of Hasardous Wastes, addressed questions of maritime transport and ocean disposal, including the need for compatibility among international legal regimes, and for possible additional measures under IMO Conventions and LDC, e.g. the observance of precautionary measures, in order to assist flag, port and coastal States to fulfil their responsibilities. It should be noted that the distinctions established by the Easel Convention are among exporting States, importing States and transit States. IMO has reiterated the need to ensure that there should be no aonfliats or overlaps, not only with existing IMO conventions but also in the future between the projected Easel Protocol on Liability, the draft Convention on Hasardous and Noxious Substances (HNS), and developments under LDC. To date, the Easel Convention has 53 signatories and 14 ratifications, and is generally expected to enter into force in 1992.

68. The 1991 Bamako Convention of 29 January 1991, signed by 11 Organisation of African Unity members, includes an outright prohibition on the dumping of hasardous wastes in African waters. Other regions such as Caribbean and Mediterranean are also actively considering introducing regional regimes for strictly controlling or prohibiting shipments and disposal of haaardous wastes, Most regions have already developed projects to monitor and regionally assess illegal traffic in toxic and dangerous products and wastes. 34/

3. Strengthening and integrating regimes for maritime safety and pollution prevention

69. Considerable progress has been made to interrelate and strengthen all rules and standards, guidelines and recommended practices and procedures pertaining to both ship safety and the prevention of pollution, This entails a whole series of adjustments and additions to ensure that they can serve this dual purpose, for example, amalgamation of lists of substanaes referred to in various instruments.

(a) Safety at sea

70. The International Convention for the Safety of Life at Sea (SOLAS) (to which 111 countries are Parties, covering 97 per cent of merchant tonnage), several other IMO Conventions and the numerous IMO Codes and Recommendations have all contributed to a reduction in the percentage of ships involved in serious casualties or lost at sea. Other instrum rts cover measures intended to ensure that the consequences of accidents are minimized. However, the sea remains a dangerous placer in fact, the improvement in the accident rate has slowed and even been reversed. 35/ IMO is thus giving priority to further improving existing roll-on/roll-off passenger ferries; to improving the level of safety of existing ships as well as for new ships; to adopting new design and construction requirements for tankers which will more effectively prevent cargo spillage) to developing a comprehensive strategy for reducing the number

of maritime accidents caused by operational error; and last, but by no means least, to promoting wider and more uniform application and enforcement of conventions.

71. Strong concerns have been expressed by IMO as to the impact that a rapidly ageing world fleet will have on the *numbers* of substandard ships, IMO has issued strong warnings that adverse trading conditions, hign costs and ahsnges in the structure of the shipping industry, have combined to threaten part achievements in safety, and thus in pollution prevention. It admittedly faces some difficult ohoiaes concerning the speed at which improved rules and regulations should be introduced: if too slow, this may encourage the adoption of unilateral measures. leading to breakdown in the international consensus on safety issues; if too rapid, this may exacerbate the growing gap in the incentive and ability of States to implement IMO requirements. The Organisation is actively seeking, therefore, to expand its technical cooperation aativitiss at regional and subregional levels in order to alleviate growing problems of implementation, including the strengthening of existing port State control measures.

72, In the shipping industry today, laid-up tonnage *has* been recommissioned, old ships which would normally have been scrapped have been kept in service, and crews have continued to shrink with increased automation even though old ships require more crew members, not fewer. The age of ships has clearly been an important factor in more recent Posses at sea. The 1991 Fourth Ministerial Conference on Port State Control in Europe (MOU countries) recognized that recent accidents to tankers, ferries and cruise ships were largely caused by poor ship management, both ship-based and shore-based, and that the age of the ships was clearly a factor. The casualty rate for bulk carriers is particularly alarming: in 1990, they accounted for 57 per cent of the ships lost, even though t-hey only represent 7 per cent *of* the total world fleet. While only 17 per cent of the world fleet is over 15 years old, 34 per cent of the bulk fleet is. 36/ Lloyds of London lists 34 bulk-carrier casualties since the beginning of 1990, with a loss of 250 lives, and cites structural weakness as the main cause.

73. According to both *IMO* and UNCTAD, the movement to open registers has *been* a major contributor to the growing *occurrences* of shipwrecks, scuttling of vessels, maritime fraud and pollution incidents. Open registries now account for *one* third of world tonnage, grown from 21.6 per cent in 1970 to *34.1* per cent in 1990. Of the 320 ships *from* some 52 flag countries, found deficient in some way by MOU countries, more than 50 per cent were registered under open registries. The 1986 United Nations Convention on Conditions for Registration of Ships which seeks to establish specific minimum conditions for registration, particularly to establish a genuine link between ship and *flag* State, has only been ratified by 7 countries which represents 0.8 per cent of the 25 per cent of world *tonnage* required for its entry into force.

74. Many IMO conventions and amendments apply only to ships built after a specific date, which is usually the date *of* entry into force) this is due to the expense involved in adjusting existing ships and to the assumption, no

longer valid, that shipowners replace ships regularly. This is no longer the case and the Maritime Safety Committee (MSC) has reached general agreement on the need to reduce the ever-increasing gap in safety standards as between new and existing ships. Its various subcommittees are *now* working to prepare reaommendatione where significant differences can be reduced by upgrading standards appliaable to existing ships. Earlier decisions on roll-on/roll-off ferries, requiring changes to existing ships also, had established a precedent. A special formula is also being worked out concerning the introduction of double hulls for oil tankers and the use of systems which *can* guarantee an equivalent result, In order to avoid making old tankers more profitable, MEPC is preparing new regulations for MARPOL Annex I to cover both new and old ships. 37/

75. Also to be noted is the decision to phase amendments *to a Convention* to allow a I-year interval between successive amendments and to coordinate dates of entry into force of all instruments having a common link or involving new surveys or ship certificates.

76. The importance of the human *factor* is ever more apparent in the prevailing conditions. Attitudes have changed, even since the adoption in 1989 of IMO guidelines on Management for the Safe Operation of Ships *and* for Pollution Prevention, in view of the number of serious accidents that have involved human error and bad management, and the further potential for accidents stemming from crew fatigue. Thus, IMO has now decided to produce a new SOLAS ahapter *and* Code on safe *management* to introduce mandatory requirements and make verification possible. This will also necessitate revision of the 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention).

(b) Emergency response

77. The 1990 IMO Convention on Oil Pollution, Preparedness and Response (OPRC) will greatly facilitate cooperation at the global level and also reinforce regional arrangements and national activities. It applies to both ships and offshore structures. Both must carry oil-spill emerqenoy plans and both must report all spills, regardless of whether they are directly involved or not. The Parties are required to assess the seriousness of a discharge and notify other affected States. Perhaps the greatest significance of this Convention is its fostering of technical support, scientific research *and* data exchange, and where appropriate financial support, particularly given its requirement8 that each Party establish a national contingency plan, and promote the availability of oil-spill response equipment and facilities. 38/

78. The 1990 Conference adopted a number of important resolutions, e.g. on the need to promote cooperative arrangements among interested parties, including the oil and shipping industries, to create stockpiles of pollution-fighting equipment; to improve salvage services; and to apply the provisions of the Convention, where possible, to other hasardous substances, pending the future expansion of the Convention to cover these substances also, That work will not be easy, given the persistent difficulties in

adequately defining haoardour substances, as experienced for instance in efforts to extend the existing Caribbean Emergenay Protoaol to cover other spills. The Conference also recognised that increased emphasis has to be given to assistance in this area; and IMO with UNEP is developing regional networks for, oolleotinq data on maritime transport of harmful substances, both in the Mediterranean and Caribbean.

79. The adoption of the OPRC was extremely timely, greatly facilitating IMO's ability to establish an operational Coordination Centre and Disaster Fund to help deal with the environmental disaster in the gulf and to render assistance to the revitalisation of the Regional Organisation for the Protection of the Marine Environment (ROPME). 39/

(c) Flag State and port State jurisdiction

80. Implementation of IMO Conventions, such as MARPOL and SOLAS, depends on the Convention on the Law of the Sea for definition of the scope and content of national jurisdiction, and specifically on its prescription of the powers of flag States, port States, and ooaatal States, where a clear hierarchy is established. 40/ While implementation of IMO Conventions has relied primarily on flag State responsibility, considerable attention hae also been given to the effective coordination of flag State and port State jurisdictional powers concerning inspections, procedures for investigating violations and assessment of the kind of sanctions to be imposed. It may also be noted that port States have taken on new responsibilities as a consequence of the 1988 United Nations Drugs Convention, the IMO Facilitation Conventian having been amended this year in order, inter alia, to adjust its standards and recommended practices in this area. IMO is now studying how any negative impaat of port-control measures can be avoided, noting that any improper detention of a ship where there is no evidence or presumption of negligence or quilt on the part of the ship operator concerned would be detrimental to the principles of the IMO Convention (A/46/511). Port State actions have also been strengthened with respect to measures against terrorism.

81. Currently" the IMO is seeking to come to grips with the question as to whether the implementation of measures to prevent pollution from ships, as well as to ensure ship safety, should cease to be the exclusive province of the flag State. 41/ This question has been posed, even with respect to the high seas, and even if the pollution to be prevented does not affect the interests of coastal States.

82. The IMO's response to date is two-pronged: applying greater pressure for compliance on flag-state Parties, particularly compliance with provisions for reporting on implementation measures and actions taken against violations; and strengthening the exercise of port-State control. IMO Conventiona do not contain requirements for operational control by port States, and existing procedures have thus been limited to matters subject to certification, To strengthen the hand of port States, the MSC has submitted a resolution for adoption at the next IMO Assembly, which introduces "operational procedures*' for port States, in respect of both ship safety and pollution prevention.

83. It may be noted that opposition was voiced by major shipping States, querying the legality of operational control by port States. Aware that this can none the less constitute an effective widening of the powers of port States, the draft resolution states that the primary responsibility still lies with flag-state administrations, and urges that port-State actions be taken in good faith, It emphasises that, since it is impracticable to define a ship as substandard solely in relation to a list of qualifying defects, an inspection must encompass not only the ship but also the crew to reach a sound judgement as to whether a ship poses a major risk and should be detained; moreover, any ship unduly detained or delayed, shall be entitled to compensation for loss. This emphasis on ships' crews stems from MSC's assessment that the main issues in flag-state compliance concern the lack of trained personnel, on ship and on shore. Preliminary texts have been prepared for amendmenta to MARPOL and SOLAS Conventions to cover these developments.

84. IWO is also increasingly urging the introduction of regional systems of port-State control, recognising at the same time that this produces the need for interregional cooperation, since world-wide harmonisation of procedures is highly desirable.

85. The main impetus for IMO to support increased powers for port States has come from the 14 European maritime authorities, Members of the 1982 Memorandum of Understanding on Port-State Control, following the decision taken at their 1991 ministerial-level Conference to extend control to compliance with operational requirements. They are now aonductinq 13,000 to 14,000 inspections annually; approximately a quarter have been delayed or detained due to substandard conditions. The USSR has issued a statement of intent to accede to the European Memorandum; *Canada,* the United Stat88 and Australia have developed similar forms of port-State control, These 14 countries have also proposed to IMO extension of vessel traffic management.

4. Antarctica

86. The Eleventh Antarctic Treaty Special Consultative Meeting adopted, on 4 October 1991, a Protocol on Environmental Protection to the Antarctic Treaty, including four Annexes, which form an integral part thereof. The Annexes relate to the Environmental Impact Assessment, the Conservation of the Antarctic Flora and Fauna, Waste Management and Waste Disposal, and the Prevention of Marine Pollution.

87. The Protocol designates Antarctica as "a natural reserve, devoted to peace and science" and sets forth the general principles which will apply to any human activity in Antarctica, so as to ensure that its environmental conditions are preserved, a8 well as those of its dependent and associated ecosystem.

88. The Protocol provides for the prohibition of all Antaratia mineral-resource activities, with the exception of scientific aativitiee. Provision is also made for the possibility of adopting additional annexes to the Protocol, inoludinq in partioulsr rules and procedures relating to l!ability for damage arising from activities taking place in the Antarctic Treaty area.

89. The Protoaol stipulates that after the expiration of 50 years from the date of entry into force, at the request of any Antarctic Treaty Consultative Party, a conference shall be held to review the operation of the Protocol (article25).

c. Conservation and management of living marine resources

1. Problems and opportunities for world fisheries

(a) Status of and trends in world fisheries

90. Stock depletion and overfishing, made worse by large-scale industrial fleets, and the degradation of ecosystems and marine and coastal habitate, are world-wide phenomena. The most marked effects have been among the richest fisheries, These problems have been acknowledged by various intergovernmental forums, inaludinq the Group 7 Economic Summit of July 1991. 42/

91. The 1990 conclusions of the Food end Agriaulture Organisation of the United Nations (FAO) as to the state *of* world marine fisheries continue to be valid. Clearly, the past pattern of growth cannot be sustained: fishing of all known stocks is approaching or has reached the maximum level and, in a number of cases, stocks are being overfished; moreover, it is unlikely that new significant stocks will be discovered in the comirg years to absorb excess capacity. Natural population fluctuations also contribute to instability, giving additional cause for changes in the yield of certain species and the behaviour of fleets and industry.

92, Aggregated aatoh statistics cannot alone depict the state of world fisheries: there are also various economic indicators such as: quantitative decreases in catches of the most valuable species; lesser guality a8 catches transfer to less valuable species; excessive costs from overinvestment in boats and gear; low incomes for fishermen and conflict among fishing groups, particularly between small-scale and large-scale fisheries; and changes in the geography of the industry. These are all trends which are intensifying. Problems of insufficiently selective gear, posing economic as well as environmental problems, of insufficiently comprehensive research, and of unreliable databases add yet further challenges for rational resource management. There is also a widespread belief among scientists and fishery manager8 that, in many cases, actual catch is in excess of official figures. Problems as regards acquisition of important information and data are as fundamental as failures to identify species caught correctly. This is especially true in tropical area8, where the number of species entering the

catches is considerably higher than in the traditional northern fishing grounde: misidentifications and inaoaurate denominations are estimated to comprise 70 per cent of catches in some tropiaal countries. 43/

93. The aotual distribution of the world aatah should also be considered. Even though the establishment of exolusive eaonomia zones and exolusive fishery zones has had a pronounced effect on national fish aatahee (approximately two thirds of the countries concerned have increased their catch at a rate faster than the rate of the world-catch increase), the major gains have been aonaentrated in a relatively few countries. For example, the top 10 developing countries account for approximately 83 per cent of the marine catch of all developing countries, and the top 15 and 20 for some 91 per cent and 96 per cent respectively. At the same time tho traditional pattern of world domination by some 20 States, accounting for some 80 per cent of the world aatah, remains, and with very little ahanqe in the makeup of the group. Only Franae and Viet Nam are no longer among them, having been replaaed by Mexico and Ecuador. Japan and the USSR continue to hold the lead. The dietant-water fishing States have so far aontinued to increase their absolute aatoh and in some cases (the USSR, the Republic of Korea and Taiwan Province of China) have done so also in proportion to the world catch.

94. The International Study on Fisheries Research undertaken by the major donors 44/ similarly concludes that world fisheries, both small and large, are characterized by large over capacities, widespread overfishing resulting in low yields, partiaularly of high-value species and sizes, open conflict and costly but largely ineffective fishery management. It warns that fishery management, which is now mostly restricting itself to the conservation of stocks, ehould rather be embracing social and eaonomia goals. 45/ In exploring the constraints on fishery development and management, it also warns that small-scale fisheries have been essentially neglected, beginning in the 1970s when EEZs were first established and attention focused on controlling foreign fishing aativitiee. The Study notes also that the crisis in marine fisheries has turned interest to aquaaulture, but that this in turn presents its own economic and environmental problems which should not be ignored. This Study attributes failures, where opportunities for expansion are exhausted, to the continuation of open access; FAO also stresses that the removal of open-access conditions, the payment of user fees, and the negotiation of maximum allowable effort levels and allocation schemes would all contribute to greater sustainability.

95. Thus, world marine fisheries are manifesting various signs of stress, exacerbating existing management problem8 with respect to fisheries in EEZs (some 95 per cent of the aatah) *and* elsewhere in the ocean. It must be emphasized that the problems that beset world fisheries are common to fishing both in the EEZ and on the high seas. The projected gap of some 20 million tons and more between world demand and supply is a clear warning that tensions will mount, and that allocation of resources will become an ever more significant and sensitive issue, not only for individual Governments but also collectively. general questions have been raised as to the most appropriate strategy to be adopted towards fisheries management, and there would appear to

b8 ■ ● morqiaq consensus that the most urgent goal is to control fishing effort generally. Thus, new attention is focusing on approaches that can address both the demand for fish and fish products and the *need* to decrease pressure on fish rtoakr, and thua achieve an Optimum relationship between ● nviromantal, eaonomio and social faotore - an approaoh embodied in the Convention on the Law of the Sea with regard to the regulation of fisheries both in the EEZ Md in the high seas. The Convention highlights the need for cooperation with respect to the conservation and management of marine living resources.

96. The problem8 and pressures are such that there is a clear need for improvemente at all levels, nationally Md internationally, and in all aspects - in law and policy, eaonomio planning, technological development, scientific research, and information and data systems, Perhaps the most pronounced recent developments are those that focus on new concepts for the scientific basis of management, new approaches to EEZ management, major improvemente in gear selectivity to resolve existing economic and environmental problems in that area, and radical strengthening of international cooperation, including institutional arrangements, for high-seas resources, straddling stocks and shared stocks. There is also a need *for* further improvement in the cooperative measures to be taken in the management and conservation *of* highly migratory species.

(b) New approaches to EEZ management

97. It is the decline in fish stocks that has given new prominence to the role of management, but there is marked dieagreement as to what measures produce Optimal fisheries management. There is agreement on the areas requiring special focus: conservation, economic performance, conflict6 between fishermen using different types of gear, and the validity and uncertainty of data concerning fish stocks. These difficulties are even more pronounced in fisheries baaed on a number of species. Stress is placed on the need first to determine the long-term objectives of fisheries management, objectives which OM command public support, reduce conflicts and provide avenues *for* settlement; then to ensure the ability to collect scientific data, accurately and in a timely manner; and to carry out research that encompasses bioloqiaal, environmental, economic and social aspects, and is responsive to the needs of management.

98. The main response to threatened stock depletion has been to strengthen regulatory controls, essentially through licence limitations, to tighten conservation measures, and to increase expenditures on monitoring and surveillance. However, as many recent studies have pointed out, *these* measures have *been* largely unsucceeeful in the face of expanding fleets and advancing technology, and attempts to maintain prosperous fishing industries have almost always failed. It is also stressed that, while advances in fishing technology and improvement8 in market8 for product8 can alleviate the economic burdens of overexpanded fleets and reduced *or* lesser valued catches, in the long run such advances will actually aggravate economic problems, since *there* is every evidence that fleets will still expand beyond the capacity

level aotually needed, even if stocks are protected by strict catch controls. It is even argued that resource conservation has become the prstext for avoiding the difficult political decisions as to who gets to fish where. Studies, suoh a8 that done by the major donors (see para. 94 above), assert that the fundamental problem resides in continuing with open access when there is no possibility of expansion, and that the best hope both for developed and developing aountry fisheries is to allocate user rights to fishermen commensurate with the different boats and equipment used.

99. Many coastal States have already excluded everyone from access to stocks except for those who hold licences, and increasingly the rights of licence-holders are quantitatively specified. Many States have revised or reinforced existing arrangements for fisheries development and management, and have now introduced detailed regulations such as those prohibiting fishing according to specified zones and periods, proscribing the us8 of certain fishing equipment and methods and the age/size of catch. Moreover, many States are seeking to encourage private-sector investment in operational aspects of fisheries while confining government intervention to basic services, such as research, stock assessment, monitoring and control. Small-scale fisheries are beginning to receive far greater attention in a number of countries, including the introduction of property rights and fishing cooperatives.

100, A number of States having reviewed their experience with extended jurisdiction are now beginning to experiment with an approach that does away altogether with open access and gives registered fishing enterprise8 a clearly defined property right in the resource. The example of New Zealand is most frequently cited, where the catch is controlled by quotas held by fishermen, thus enabling a relaxation of regulations such as closed seasons and gear restrictions and allowing a shift from surveillance at sea to monitoring of landings. The system effectively separates the responsibility for managing operations from that of resource conservation and environmental protection, retaining the latter as the sole responsibility of government which sets the performance standards specific to each fishery or resource management unit. The New Zealand experience has shown improved mana,ement of stocks, reductions in redundant fishing capacity, alleviation of conflicts over the allocation of catch, and substantially improved economic return8 *from* fishing to both industry and government. The *success* of such *a* system, however, *depends* heavily on a reliable register of rights, and a fast and efficient system of repot tinq catches, keeping records and enforcing rights. It also produces a substantially increased demand for better stock assessments and the need clearly to identify research priorities and objectives. Australia has issued a new policy statement for the 1990s on needs for structural adjustment and innovative management concepts and methods; Iceland has replaced controls over fishing effort8 and days permitted for fishing with catch-quotas assigned to individual vessels (1991); Spain has established a fish-producers orqaniaation giving it special responsibilities of resource management and regulation in respect of landings and markets) Sri Lanka's new fisheries plan puts emphasis on more efficient use of resources rather than maximisation of output.

101. It is as yet unclear what the dominant management trend will be in the future, particularly since a number of countries have only recently taken the necessary legal and institutional steps consequent on the establishment of an EEZ, or have adopted only recently the policies and regulations required for national exploitation or for entry into joint ventures. There are also continuing widespread problems with monitoring, control and surveillance, regardless of the state of evolution of management, leading countries to tighten access agreements by provisions on port calls, transshipment of catch, and the use of transponders for monitoring. African States bordering the Atlantic, for example, report serious problems with illegal foreign fishing and, like South Pacific States members of the Forum Fisheries Agency, are moving towards regional surveillance arrangements (see para. 126 below). Other responses include Senegal's new Maritime Protection Service (1991) which has been established in response to an estimated $250 million in illegally exported fish in 1990; and Malaysia's establishment of a central command for fisheries monitoring, control and surveillance to coordinate the work of various agencies. Finally, many developing States remain uncertain as to the net benefits to be obtained from developing national catch and management capabilities, given the opportunity costs of such investment, and the conflict of goals for resource utilization as between local consumption and international trade. The value of such trade by developing countries has more than doubled over the past five to six years and now accounts for about 47 per cent of world trade.

102. Recent years have seen numerous instances of the regrouping and reorienting of regional and subregional fisheries cooperation in the North and South Pacific, in the Indian Ocean, and in the Atlantic, so it is also possible that new approaches to management may become more a matter of collective, rather than exclusively individual, decision-making by States, The establishment of new economic integration groups, as in the case of the new South American Common Market, may also be expected to have an important impact on management approaches.

(c) The selectivity of fishing gear

103. Various fishing practices can rapidly deplete targeted stocks, destroy habitat, and damage non-targeted species. Management action needs to restrict the number of vessels or the amount of gear deployed, and/or restrict the effective area of operation for the gear. Management action is also required to encourage such vessels to use more selective gear. The marking of fishing vessels and gear is also an important component of responsible fishing.

104. Insufficiently selective gear will produce by-catches of non-marketable, undersized or non-targeted species, including protected species. Problems associated with the protection of marine mammals have exacerbated to the extent of trade embargoes on catch, as in the case of United States trade restrictions against Mexico, Venezuela and Vanuatu tuna catches, and the consequent issue in GATT as to its recognition of environmental and conservation objectives, Selectivity is the ability of gear to take one species rather than another, the best results depending on the time of

operation and hydrological and other conditions; and, for a single species, to retain only the individuals that have reached a certain size, where results are determined by mesh size. There are, however, particular problems when dealing with multiple stocks or multispacies fisheries, since multiapecies gears make conventional management by single species difficult, if not impossible. This may be seen in practice in the North Atlantic, where the theory and practice underlying definition of quotas is now in crisis, with ever increasingly complex problems with multispecies, multigear interactions. Some multigear interactions could be resolved technically, end a few by improved stock asaeassment calculations. 46/

105. Mesh regulations are now commonly used. Regulations on the use of gear, however, are only now beginning to be introduced, as evidenced by the number of recent bans, by diatanae or depth, on trawling close to the coast: in Malaysia and in Senegal, in a 6-mile fringe; in India, in a 5-km strip for small trawlers and a 10-km strip for industrial trawlerat in Suriname and French Guyana to certain specified depths; and in the Gulf of Mexico by seasons as well as zones. Another approach is directed at controlling fishing effort, for example Australian regulations on trawl size and number of trawls per boat.

(d) Marking of fishing gear

106. There is a clear relationship between the marking of fishing gear and problems of entanglement in nets and discarded fishing gear, but there are no international regulations, guidelines or common practice for gear deployed outside of national jurisdictions. This work has now been done by an FAO Expert Consultation (July 1991). The primary purpose of standardised markings is to determine ownership and indicate the position of gear in the water; a marking system will contribute also to the ability of States to meet their obligations under MARPOL Annex V (which covers lost or discarded gear), and should result in leas gear being abandoned at sea, and more effective reporting and retrieving of lost gear. 47/

107. Since the guidelines will be of considerable benefit also to coastal States, various recommendations are made as to their application, e.g., making markings a licensing condition. Among the suggestions made is that fish-aggregating devices (e.g., artificial reefs) should be subject to a system of prior approval and registration, At present, there *are* very few legal or administrative rules governing these devices. In respect of the safety of navigation, it is further recommended that these devices be treated the same as any other underwater obstruction or offshore struature. IMO is now considering how to reflect the new Guidelines in navigation rules. 48/

2. Strengthening international cooperation

108. Various forums, regional and global, have expressed strong concerns as ta the present scope and effectiveness of international cooperation in fisheries. The Group 7 Economic Summit in July, for example, in acknowledging

the throat of overfishing and other harmful practices, has called for the implementation of protective measures in accordance with international law, urging greater compliance with, and more effective monitoring and enforcement measures under, regimes established by regional fisheries organizations. Others have called generally for greater cooperation at bilateral, regional and global levels to ensure the conservation and optimum utilisation of high-seas resources, straddling stocks, highly migratory species and transboundary atooks which occur in the jurisdictions of one or more coastal States. The objectives of cooperative action require a special foaus on broadening research, improving data ayatema to support both research and management, and developing sound fisheries practices that minimize waste and reduce by-catch, as well as on strengthening monitoring and aurveillanae. Coastal State experience with access agreements is now such that strong common positions are possible in a number of regions as to minimum terms and conditions for access.

109. Thus, oooperation in fisheries is now moving on two broad fronts: oooperation among ooastal States to achieve objectives which would be unattainable through individual action; and oooperation, albeit at an embryonic stage (except for tuna), on fisheries beyond national jurisdiction.

(a) Priority issues for regions

110. It should be noted that many regional organisations, including fishery bodies, have pointed to the need for close oooperation between programmes and organizations, ● paaifioally between FAO/IOC/UNEP, to facilitate research and asseaament, and protection from pollution and other types of degradation which affect fishery resources ♋■♎ ● aoayatema. Regulation of fishing effort is insufficient on its own, and a major problem has been *the dispersion of* responsibilities among many international and national organisations with competence in the various relevant aspects of resource and environmental use. From the various regional submiaaiona made in the United Nations Conference on Environment and Development (UNCED) context, there is a clearly emerging priority for bringing fisheries and aquatic habitats under *effective* and Integrated management regimes.

The European Community

111. Conditions in the European region are illustrative of problems world wide; and the need to preserve fish stocks may well define the Community's fishing policies over the coming years. 49/ Studies on the state of atocka in the region, in relation to the management record, reveal many years of overfishing compounded *by* TACs (Total Allowable Catches) being set too high; non-compliance with technical conservation meaaurea so that too many young fish are caught; overcapacity in fleets (at present 40 per cent); and excessive discarding, particularly in mixed fisheries, to avoid exceeding quotas and to comply with by-catch regulations. The TAC/quota system (the division of TAC into individual State quotas) has been the *main* form of limiting effort; technical conservation measures (mesh size, alosed *aeaaona* and closed areas) are mainly used to protect immature fish and spawning and nursery grounds.

112. Some more novel and controversial forma have already been attempted. For example, additional restrictions have been applied for several North Sea stocks, beginning in 1991, to reduoe the *risk* of new lower quotas being exceeded, e.g. certain vessels must spend a specified number *of* days in port Md a 12-mile zone is generally reserved for local vessels only.

113. Basic elements of the Community system are now under review, and the Commission will present a report by the end of 1991. Suggestions so far have concentrated on overhauling the TAC/quota system, the adoption of stricter measures for supervising Md monitoring fishing effort, and more stringent technical oonservation measures. Experts have called for lower TACs, refinement of the system *for* multispecies fisheries so that species interrelationships are taken into account when setting TACs, *and* longer-term conaiatenay in setting TACs to encourage longer-term planning by the industry. Also stressed is the need to move to individual vessel quotas as a *more* effective means of ensuring compliance, and greater efforts to eliminate excess oapaaity in fleets, e.g. in the recommendation to reduce the size of fleets by as much as 40 per cent *for* the moat threatened species in the North Sea.

114. While there has been broad agreement *in* the European Community (EEC) on the retention *of* the TAC/quota system, 50/ it is also recognised that a number of adjustments need to be made, for example, whoa TACs and quotas *are* fixed, care must be taken to define more precisely the level of fishing which stocks could sustain and to match quantitative limits more accurately to specific aharacteristias of certain areas Md interaction of biologiaal stoaks. Also now recognised is the need to improve technical oonservation measures, to intensify enforcement, and reduce existing overcapacity.

Mediterranean

115, In the Mediterranean, regional cooperation is markedly different from other areas of the world, in that very few EEZs have been established; thus restrictions on fishing have *to* be developed internationally, although the General Fisheries Council *for* the Mediterranean (GFCM) has *not* as yet used its powers to recommend conservation Md management maaaurea. This situation has been noted partioularly with regard *to* the establishment of protected areas *to* close off areas to fishing or to reatriat the use of certain types of *gear*, including driftnets. *For* EEC countries the problem is different, in that protection of areas outside the territorial sea against al1 fishing vessels requires a decision of the Council of the EEC; and there is some indication *of* an interest to move *in* this direction in the proposal being negotiated *for* a directive on the protection of habitats. Mediterranean environmental iaauea, including fisheries aspects, is generally receiving increased attention from the European Community and from ECE. *Moreover*, IOC is considering new efforts in the Mediterranean given its interest in it as a teat basin.

North Pacific

116. In the North Pacific, attention has focused on the need to ensure cooperation in marine scientific research, encompassing fishery and marine environmental research, analogous to International Council for the Exploration of the Sea (ICES) for the North Atlantic. The North Pacific Marine Science Organisation (PICES) Convention was adopted on 12 December 1990 by Canada, China, Japan, the USSR and the United States. The area covered by the new organisation is defined as the temperate and subarctic region of the North Paaifio Ocean and its adjacent seas, especially northward of 30 degrees north latitude. Its article XII specifies that nothing in the Convention nor activities of the organization purauent to it affects the sovereignty, sovereign rights and jurisdiction of a Party over its territorial sea, 200-mile zone, or continental shelf. The Convention is open to additional countries. Efforts are also under way to negotiate a new convention to oontrol high seas capture of anadromous species, to replace INPFC (International North Pacific Fisheries Commission), and encompass the USSR, as well as Canada, Japan and the United States. Negotiations also have begun on the management of fishing activities in the central Bering Sea (high-seas "donut hole") involving Korea, Japan, Poland, China, and also the USSR and the United States as coastal States.

Atlantic Ocean

117. In Africa, cooperation among coastal States has been dramatically broadened by the adoption on 5 July of a Convention on Fisheries Cooperation among African States bordering the Atlantic Ocean (22 States, from Morocco to Namibia), at the second session of the Ministerial Conference of these states. 51/

118. This Convention is comprehensive, embracing marine scientific research and environmental protection aspects also, and the developmental as well as assessment, management and conservation requirements of fisheries. It contemplate6 not oaly harmonization of policies but a substantial measure of joint or coordinated action. The Convention is also outward-looking in that it calls for coordinated actio.. by members on highly migratory species, within tha context of the appropriate international organiaationa, and generally calls for information exchanges and consultations in order to harmonise position8 in international fisheries conferences, and to benefit from each other's experiences with agreements with third parties.

119. Heavily underscored by the Ministerial Conference was the urgent need to provide a lasting framework for regional cooperation on monitoring, control and surveillance, and to obtain international cooperation, including financial assistance, to combat all forms of illegal fishing. The Commission on Fisheries composed of Cape Verde, the Gambia, Guinea, Guinea-Biesau, Mauritania and Senegal has made such requests with respect to establishing a register of vessels in that subregion. 52/

South Atlantic

120. In the South Atlantic, a new bilateral South Atlantic Fisheries Commission has been formed by Argentina and the United Kingdom (November 1990). Their agreement establishes a Falkland Outer Conservation Zone (a 150-mile none), and imposes a temporary total ban on commercial fishing for ships of any flag between latitudes 45 and 60 (a 200-mile zone). Considerable concern had been voiced at the unregulated and irresponsible fishing outride the 150-mile limit, gartiaularly regarding illex squid stocks. *Both* States will furnish information on the operations of fishing fleets, appropriate catch and effort statistics and analyses of the stocks of the most significant species. The Commission is to assess information received and recommend conservation measures, propos' joint scientific research work, and recommend also, in accorda~ce with international law, possible actions for the conservation in international waters of migratory and straddling stocks and species related to them. Tha Joint Statement declares that nothing in the oonduat or content of the present meeting or similar subsequent meetings should be interpreted as a change in the position of either party with regard to sovereignty or territorial and maritime jurisdiction over the Falkland Islands, South Georgia and South Sandwich Islands and the surrounding maritime areas.

Caribbean

121. In the Caribbean, there has been a dual emphasis on wider cooperation as well as subregional cooperation. There has been a steadily increasing emphasis on the need to harmonise management measures, analogous to the South Pacific and now also Atlantic Africa, but with one major difference. The geography of the region, and the extent to which resources are biologically and eaonomiaally shared, has produced a marked trend towards the development of the "shared-stock" concept. Given also the notable increase in fishing effort directed at large migratory pelagic species, there is now a strong interest in formulating cooperative management plans, the first step being to exchange the scientific information and data needed, 53/

122. There is additional evidence of expanded cooperation on research into shared stocks in the region. Trinidad and Tobago has signed a research protocol on fishery resources with Venezuela; and there has been strong interest in developing joint research on shrimp and lobster resources among Central American countries (from Mexico to Panama), analogoue to the working *group* on Guyana-Brazil shelf shrimp.

3. Cooperation on highly migratory species

Mediterranean

123. In the Mediterranean, the convening of the first joint expert meeting between GFCM and the International Commission for the Conservation of Atlantic Tunas (ICCAT) in June 1990 was regarded as an important development. It served partiaularly to highlight the problems that can arise for stock-assessment aapability and consequently for management, when some countries are not members of the relevant organization (ICCAT) and where insufficient coordination mechanisms are in place, 54/

124. ICCAT has recommended regulatory measures for the conservation of Atlantic swordfish with effect from July 1991, no objection having been entered. They call for a 15-per-cent reduction in the catch from the North Atlantic in an attempt to bring it back to where it waa in 1988) and a prohibition, oceanwide, on taking fish smaller than the specified size, any incidental catch below legal size being limited to no more than 15 per aent of the number oaught. To be noted is that ICCAT has specifically indicated that Parties taking relatively small catches should also abide by these meaaureb and that non-ICCAT members should *be* informed of the new regulations, ao that they may cooperate by taking similar conservation measures.

Indian Ocean

125. A new Western Indian Ocean Tuna Organization *was formed* by the Seychelles Convention in June 1991 to which only coastal States can accede. Activities of the Association Thonière, with aupport from the European Community, alro involve a number of States of the region. Indian Ocean Marine Affairs Cooperation (IOMAC), which also has *a* general interest in question8 of fisheries development and management, has stressed the need to avoid dupliaation and to promote cost-effective regional coordination in tuna management. It is thus attempting, on an urgent basis, to review all the various initiatives, agreements and programmes on tuna development and management so that members may have a better picture of the comparative advantages of the various institutional arrangements for tuna research, management and development in the region. Anticipated developments in the marine science sector will in turn benefit fisheries cooperation, and IOMAC CM be expected to give high priority to this area. It may be noted that IOC is also considering whether a single aubcommiasion for the entire Indian *Ocean* may be preferable, for logistic and scientific reasons.

South Pacific

126. In the South Pacific, the Tuna Agreement between the United States and the island States is now in its fourth year of operation; in its first three years, island nations received payments of over 849 million, and over 40 United States vessels operate in the region. The United States and *France* signed an agreement in March 1991 which would allow United States vessels to begin fishing in the EEZ of New Caledonia and Wallis and Futuna Islands. It

ahould be noted that the United States now claims sovereign jurisdiction over tuna and all other highly migratory species found within the EEZ of the United States, effective January 1992, and recognizes similar claims by coastal States, effective November 1990. Monitoring and control in the region is expected to benefit from the *Forum* Fisheries Agency *(FFA)* new direct satellite communication through the International Maritime Satellite Organisation (INMARSAT) and PEACESAT with its members. Also, the United States Western Paaifio Regional Fisheries Management Council is testing varioue vessel tracking systems in anticipation of the requirement that all longline vessels operation in the Council's sone carry transponders.

4. High-seas fisheries and straddling stocks

127. Twenty years ago the rough estimate of catch taken beyond the continental margin was between 1 to S per aent of the total marine catch. It is presumably far higher than that today, partiaularly given the considerable expansion into certain high-seas regions: in the North Paaifio for squid and salmon; in the central Bering Sea for Alaska pollaokt in the Central and South Pacific and Indian Ocean for albacore; in the South-East Pacific for jack mackerel; and in the Southern Ocean for krill and Antarctic cod.

128. Most high-oeaa resources have a life aycle phase in the EEZ. Existing fisheries bodies (except for tuna and whales) also cover coastal areas, and have traditionally concentrated their efforts there. Most operate by consensus and have no binding authority with respect to management and conservation measures; those that have the power to recommend measures have seldom done so. Most either do not have the leverage to apply economic pressures to achieve conservation goals or the ability to gather and analyse the basic data needed to identify conservation needs. Most if not all have repeatedly set TAC/quotas *higher* than the scientifically based level that was recommended. Org :.ii:ations which do specif ically cover exploitation of high-seas and traneboundary stocks resources face additional monitoring and control problems, and particular problems with data collection *and* stock assessment, a task which involves not only oceanic stocks but also EEZ/high-seas interactiona. The problems, as has been seen, extend to that of obtaining unbiased data on by-aatch. In the case *of* NAFO, problems have been exacerbated to the extent of vessel reflagging allowed to non-member States to escape controls; questions are also being raised as to the efficacy of agreements where there are new entrants, without a prior history of fishing in a region, which do *not* become members of the organization in question.

129. There is need for better knowlec.ye of high-seas resources concentrating on stock struaturea (populations and natural management areas), migrations (routes and rates), reproduction (life cycles, reproduction atrategira, stock-recruitment relationships), bio-economic interactiona, allocation issues, high-seas fleet strategies (distribution by area and season) and fleet dynamics. An international programme of work needs to be drawn up, and the FAO expert consultations planned to begin in 1992 can be expected to take up these questions. FAO/COFI and the Council have agreed that the question of

rational management of high-seas living resource8 warrant8 close consideration by FAO, in cooperation with UN/OALOS. Expert consultation8 will be held on this matter and will be followed up by an intergovernmental meeting.

130. The • 1ahoration of the law of the sea regime for the rational management and conservation of high-seas living resources is now firmly inscribed on the international agenda. While this may be in large part attributable to the large-saalo driftnet fishing issue, it is to be emphasised that this issue is but one symptom of the larger problems confronting world fisheries, within national jurisdiction and beyond. Another symptom is the reports of problems of overfishing by distant water fleets in the proximity of EEZs. So far they have come from the north-east Atlantic, the Bering Sea, the south-east Pacific and the south-east Atlantic, but the real scope and extent of the problem is not yet known. South-east Pacific and Eastern Caribbean States, for example, have urged the international community to carry out joint scientific, technical and economic studies, with a view to taking appropriate measures and establishing mechanism8 for conservation and optimum use of living resource8 found beyond 200 miles where the same stock8 or species occur in national maritime sones. This would require, inter alia, that high-seas operators provide reliable fishing statistics to be used in the management of resource8 by coastal State8 whiah conduct fishing activities on the same population8 or populations of associated species.

131. Examination of the legal regime applying to the high-seas fisheries has been initiated in Expert Consultations, convened by UN/OALOS, which were held in July 1991. The report will be published shortly. It has been concluded that proper implementation of the Convention on the Law of the Sea provisions require8 a olrar understanding of the specific rights and duties of States claiming a right to engage in high-seas fisheries, beginning with the recognition that the right to fish is subject to obligation8 to conserve and manage the resources in question, and also to the obligation to recognise the rights, duties and interest8 of coastal States in those cases where resources are straddling stocks or highly migratory species. The Convention specifies the respective rights of States in both those cases, thus providing a basis for resolving aonfliating interests. It is to be noted that whenever claims to exploitation conflict with obligation8 *of* conservation and management, the Convention opts for the latter, both for the high-seas and EEZ regimes,

132. It has also been concluded that future developments must encompass not only legal, but also institutional and policy aspects: recommended standards for management must be continuously developed and specific management regimes adopted within subregional and regional fisheries organisations. Management regimes, it is emphasised, must be based on scientific assessment of stocks, determination of allowable catches and allocation of quotas, or other management measures as appropriate, as well as on international and domestic monitoring and enforcement mechanisms. The need for catch statistics and other data, as listed above, will require various actions by States and organizations.

133. To facilitate general agreement on the legal, institutional and policy requirements for better implementation of the Convention's high-seas regime, the recent expert consultation has suggested certain guidelines.

5. Marine mammals

134. At its May annual meeting, the International Whaling Commission (IWC) decided to postpone its review of the moratorium on commercial whaling because of the need for further study of the methods that would be used in implementing a new resource-management procedure. Propoaals by Japan, Iceland and Norway to adopt the new procedure for 1992, at least for minke whales, was rejected. Also rejected were proposals by Iceland and the USSR for catching minke or razorback whales for scientific research purposes. Iceland has threatened to withdraw from IWC.

135. Besides questions pertaining to the present moratorium on commercial whaling at IWC and also issues surrounding the system of scientific research permits, other developments focus primarily on small cetaceans. In October 1990, the Netherlands, Germany and Denmark aonaluded an Agreement on the Conservation of Seals in the Wadden Sea, the first such agreement to be done under the 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals. Its provisions concern the coordination of research and monitoring, prohibition on taking of seals with an exception for scientific research, habitat protection, pollution prevention. Actual protective measures are deferred to the Conservation and Management Plan whioh has yet to be established in accordance with the Bonn Convention (article IV). The 1990 Memorandum of Understanding on Small Cetacean8 in the North Sea is to be followed up by an agreement for the conservation of the North Sea and Baltic Sea species, also falling under the 1979 Bonn Convention.

D. Policy developments with respect to marine scientific research

136. Oceanography is about to enter a new era of systematic observetion of the oceans, highlighting the need for strong support for cooperative arrangement8 undertaken or endorsed by international organizations, for new approaches to funding of research, and for national policy-making and infrastructural development. The extent of the cooperation required to gain a much broader knowledge of ocean systems and processes and of the significance of human impacts on the marine environment has brought new attention to bear on the rights and duties of States with respect to marine scientific research, contained in Part XIII of the Convention,

137, Climate studies in particular require a far greater understanding of the world ocean system than is at present the case. Present efforts must necessarily focus on global-scale studies, the aim being to monitor key aspects of ocean variability, rather than produce a uniform data coverage. The present focus is thus on the North Atlantic, Southern Ocean, Arctic Ocean

and the tropical oceans, ● specially in relation to El Niño and monsoons. Au these global studies progressively yield clues to regional and subregional variations in response to climate change, consequent adjustments will need to be made in the focus of activity. The coordination of the scientific definition of pertinent problemr and goals and development of investigative programmer is an international responsibilicy, while management of the conduct of research will necessarily be largely a national responsibility. Participating nations are expected to develop their own scientific contributions consistent with their capabilities and interests, and considering that sophisticated technology is not always necessary, e.g. for mea-level stations, expendable bathy-thermograph measurement6 and drifting buoy deployment, XOC has in fact stressed that an effective way of decentralising highly complex coordinating functions would be to select members to function as lead Staten far specific activities, as often suggested by regional bodies.

138. As large-roale research progresses towards a aonoentration an specific issues and areas, the process aould become unnecessarily politicised unless there is strict application of the Convention's consent regime, full awareness of the need to avoid conflicts over access, and a continuing commitment to promote and support research based an scientific priorities established by the international community. Studies of global ocean circulation are important far more than climate issues; they can also be expected ta yield results an biological processes, witb implications in the future for fisheries, ocean dumping *and* other issues, and thus far further potential politicisation of research. It will be highly important therefore ta foster and maintain close associations between scientific organizations at all levels and to support scientific consensus as ta special areas of focus.

139. New emphasis is being placed on the importance of article 247 of the Convention in relation to the practical implementation of the Convention's consent regime; the provision accords special status to scientific research projects undertaken by or under the auspices of an international organisation in that the organisation concerned is not required to apply for consent from a State member of the organisation which has not expressed any objection ta the grojeat or has an agreement with that organization. The Guide to the relevant provision8 of the United Nations Convention on the Law of the Sea concerning marine scientific research, 55/ prepared under the auspices of UN/OALOS and IOC in 1990, proposes a standard form for seeking consent to conduct marine scieutific research in areas under national jurisdiction. It notes that it would be advisable far international organisations also ta use a similar form the purpose of notifying the coastal State concerned of the project.

140. At present, the three main international ocean programmes focused on climate questions are World Ocean Ciroulation Experiment (WOCE), Tropical Oceans and Global Atmosphere (TOGA) and Qlobal Ocean Flux Studier (GOFS). For both WOCB and TOGA, reliable access is imperative ta gain temperature and current data aver the broadest spatial and temporal scales; for GOFS, access ta shelf areas to obtain sediment cores is essential; and all need ta make in situ hydragraphic observations ta establish surface truth for satellite

observations. WOCE is particularly reliant an being able ta observe large areas within as short a time as possible ta get near-simultaneous data sets of circulation feature& and ta return to areas in order to get a complete series of repeat measurements. Thus, the aoastal States concerned are asked ta bear these requirements in mind so that delays in gaining consent or carrying out work da not jeopardize the value of data sets.

141. Marine scientific research generally, and particularly climate-related research, will rely increasingly an the use of autonomous measuring equipment: moored units for localized velocity, subsurface floaters for currents, surface drifters for velocity and for relating surface parameters to satellite measurements. Arrays of moored instruments are planned far all the oceans, and variously linked ta hydrographic observations, process experiments or other measurements; and all types of floater6 and drifter6 are planned (approximately 6,000 in all) according to their applicability and cost-effectiveness. The objective is ta monitor ocean circulation simultaneously and continuously aver great spatial and temporal scales. The Drifting Buoy Cooperation Panel of IOC/WMO is currently addressing issues of data transmission. Thus, coastal States are asked to bear in mind not only the need far access of the equipment itself but access far ships deploying and retrieving autonomous equipment. Reaccess to measuring devices will alro be essential. Since ship effort may not be sufficient ta deploy the numbers of instruments contemplated, airaraft may need ta be used also.

142. Work an the legal aspects of Ocean Data Acquisition Systems (ODAS) has been considerably advanced through preparation of a draft convention by IOC to provide a basis far further expert work to be organized by IOC, WMO and UN/OALOS, as members of ICSPRO. governmental consideration of the results will presumably be greatly influenced by new perception8 as ta the requirements of the various existing and projected ocean-observing systems.

143, The IOC Assembly has proposed the establishment of a Global Ocean Observing System, wilding on a number of existing cooperative programmes. In fact it is not a new concept, but rather a revised response to new demands and new opportunities, particularly as represented by major technological improvements. A systems design and developmental strategy has been prepared, ta encompass not only climate studies but also research on living marine resources and coastal ocean pollution, and the provision of ocean services. The Assembly has stressed the importance of an integrated approach that would ensure that activities under different programmes and in different regions and an specific phenomena are fully considered and coordinated synergistically. A statement has also been adapted an the importance of recognizing ocean observations Md research in the framework convention on alimate change. 56/ A further statement on ocean8 and alimate was adopted at a special meeting, convened by the Government of Malta in July, and a draft article which could be considered for inclusion in the new convention. It calls far States ta cooperate, directly or through competent international organisations (such as IOC and WMO), for the purpose of promoting studies, undertaking programmes of

scientific research and systematic observations Md encouraging the exchange of information and data required with *respect* to the role of the oceans in climate change. States are also asked to endeavour to participate actively *in* regional and global programmes designed to acquire such knowledge. Section 2 of Part XIII of the Law of the Sea Convention establishes certain obligations of international cooperation in marine scientific research, including cooperation between States and international organizations ta create favourable conditions for the conduct of research in the marine environment and ta integrate the effort8 of scientists in studying the essence of phenomena Md processes occurring in *the marine* environment and the interrelations between them (articles 242 to 244). Other provisions concern international cooperation *an* studies, research programmes and exchange of data coxcerning pollution of the marine environment, and monitoring and environmental assessment (articles 200 and 204).

144. Data and information management and exchange is *now* considered *one* of the pre-eminent challenges in global change research, so that the need far a clear intergovernmental policy, particularly among the main researching States, is now recognised, The IOC Assembly has stressed the importance of free, open and timely exchange of data and information, and of having research products likewise made freely available to all participants. Suggested policy elements include: continuing commitment to the estsblisbment, maintenance, validation, accessibility and distribution of high quality, long-term data sets; full and open sharing of the full suite of global data sets for researchers world wide; preservation of all data needed for Pong-term qlobal Change research and designation of data archives; establishment of criteria and procedure8 far setting priorities for data acquisition; and provision of data ta researchers at the lowest possible cost. Greatly expanded international cooperation is also urged with respect to ensuring the widest possible access to quality-controlled data and access to geographic areas to obtain the data.

V. THE PREPARATORY COMMISSION FOR THE INTERNATIONAL SEABED AUTHORITY AND FOR THE INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA

145. The Preparatory Commission met twice during 1991: it held its ninth session at Kingston from 25 February to 22 March 1991, and a summer meeting in New York from 12 to 30 August 1991. It decided to hold its tenth session at Kingston from 24 February ta 13 March 1992. In accordance with general Assembly resolution 37/66 of 3 December 1982, provision has been made in the programme budget (1992-1993) far servicing the meetings of the Preparatory Commission ta be held at Kingston and New York in 1992 and 1993.

A. Plenary 60/

1. Implementation of resolution II of the Third United Nations Conference on the Law of the Sea

146. The Preparatory Commission approved two applications for registration as pioneer investors in 1991. The first application was submitted by China far registration of the China Ocean Mineral Resources Research and Development Association (COMRA) as a pioneer investor, and was approved by the Oeneral Committee on the basis of the report of the Oroup of Technical Experts an 5 March 1991. 61/ The areas which have been reserved for the Authority and allocated to the pioneer investor are situated in the Clarion-Clipperton Zone of the North Pacific. The second application was submitted by Bulgaria, Cuba, the Czech and Slovak Federal Republic, Poland and the USSR for registration of the Interooeanmetal Joint Organization (IOM) as a pioneer investor, and was approved by the Oeneral Committee an the basis of the report of the Oroup of Technical Experts an 21 August 1991. 62/ The area8 which have been reserved far the Authority and allocated to the pioneer investor are situated in the North-East Pacific.

147. The Preparatory Commission, as the General Committee had recommended, decided ta include Cuba in the list of States having the right ta apply a8 pioneer investors in accordance with resolution II for one pioneer area until the Convention an the Law of the Sea enters into farce.

143, It will be recalled that the Preparatory Commission had already in 1987 registered as pioneer investors the Institut français de recherche pour l'exploitation de la mer (IFREMER), the Government of India, Deep Ocean Resources Development Co., Ltd. (DORD) and Yuzhmorgeologiya, whose application8 were submitted by the Governments of France, India, Japan and the USSR, respectively.

149. The Chairman of the Preparatory Commission continued hi8 informal consultations an the implementation of the obligation8 of the registered pioneer inventor COMRA. Although the consultations on implementation of the obligations of COMRA have been completed, it became apparent that more time would be needed to enable the Oeneral Committee to adopt the understanding, inasmuch as the matter of similar treatment for future applicants was still pending.

150. The Chairman informed the Oeneral Committee that it was his intention to convene meetings of the Oeneral Committee to monitor implementation of the obligations of the registered pioneer investors.

151. With respect ta the implementation of the obligations of the first group of registered pioneer investore, i.e., France, India, Japan and the USSR, in accordance with the Understanding on the Fulfilmant of Obligation8 by the Registered Pioneer Investors and their Certifying States which was adapted an

30 August 1990 (LOS/PCN/L.87, annex), the following developments took place during the summer meetings8 (i) Training: The Training Panel which was established at the ninth session, commenced it8 work on the establishment of a training schedule. It decided that traineeships should cover the following priority disciplines: chemical/metallurgical, electrical, electronic, mechanical and mining engineering as well as marine geology, marine geophysics and marine ecology. Following an examination of the training programmes which had been submitted by France, Japan and the USSR, it requested both Japan and the Soviet Union to make adjustments to their programmes. It decided that the commencement date specified in the French training programme would be maintained, At the next session, the Panel will consider the revised training programmes as well au the training programme to be submitted by India, and on the basis of these programmes it will develop specific criteria for the selection of candidates and standard forms for applications.
(ii) Exploration: The preparatory work for the exploration of one mine site in the areas reserved *for the* Authority has been completed by France, Japan and the Soviet Union and a joint report *marked* "Preparatory *Work* in the International Authority Reserved Area - August 1991" has been transmitted to the Special Representative of the Secretary-general *for* the Law of the Sea, the Under-Secretary-General for Ocean Affairs and the Law of the Sea, for submission to the Preparatory *Commission*. The Commission d·cided that the details of the data and information contained in that report will be presented for review and evaluation to a group of technical experts.

2. The preparation of draft agreements, rules, regulations and procedures for the International Seabed Authority

152, The Plenary completed its second reading of the draft Agreement concerning the Relationship between the United Nations and the Authority and provisionally approved a number of its provisions. It was decided to delete three articles concerning relations with specialised agencies, administrative cooperation and cooperation among regional branches, centres and offices. Discussion on those articles, or parts thereof, on which no agreement could be reached will be continued at the level of informal consultations. *As far* as the articles on personnel arrangements, budgetary and financial matters and *financing* of special services are concerned, it was decided to defer their consideration until after the discussion of the paper on administrative arrangements, structure and financial implications *of* the Authority.

153. The Plenary began its consideration of the above-mentioned paper at the summer meeting. Focusing its attention on matters such a8 financial guidelines; functions of the Authority during *the* initial period; staffing requirements eto., the Plenary agreed that the structure of the Authority should *ensure efficiency* and cost-effectiveness and that it should be no larger *or* smaller than required in order to guarantee the adquate performance of its functions at a particular stage of its activities; that an evolutionary approach should be provided fort and that the nature and level of the staff would depend on the activities to be performed by the Authority. Further discussions on the paper were continued at the level of consultations.

154. Informal consultations also continued on matters relating to the *Finance* Committee.

155. At the next session the Plenary will finalise the text of the relationship agreement at the level of informal consultations; continue its consideration of administrative arrangements, structure and financial implications of the Authority; disauss the pending artiales of the draft Protocol on the Privileges and Immunities of the Authority as well as one pending article of the draft Agreement between the Authority and the government of Jamaica regarding the Headquarters of the Authority) and continue its informal consultations on the *Finance* Committee and the so-called "hard-core" issues.

B. Special Commission 1 63/

156. Special Commission 1 studies problems that would be encountered by developing land-based producer States as a result of the production of minerals from the deep seabed.

157. It continued its consideration of the provisional conclusions of its deliberations which can form the basis of its recommendations to the Authority on how best to minimise the difficulties of land-based producer States. A negotiating group was established to facilitate the negotiations and suggest compromise solutions. This Group has made considerable progress *in* its solution-seeking efforts and will continue its work at the *next* session.

158. The Ad Hoc Working Group which is entrusted with the task of dealing with certain hard-core iasuee concentrated most of its work on efforts to resolve *one 03* the issues, namely, criteria for the identification of land-based producer States actually or likely to be affected by deep-seabed production. These efforts, which seemed to be leading to successful outcomes, will be taken up at the next session, as well as other issues. Since the issues dealt with in the Working group are interrelated with many of the provisional conclusions under consideration in the Negotiating Group, efforts will be made, at *the* next session, for finding an effective way of integrating the *outcome* of the work of the Ad Hoc Group with that of the Negotiating group.

159, Following a review of international commodity agreements or arrangements to assess the potentials of such measures for minimising the difficulties which might be encountered by developing land-based producer States as a result of seabed production and for helping these States to make the necessary economic adjustment, Special Commission 1/ agreed in general that the Commission, and in the future, the Authority might benefit moat by keeping abreast with the developments with regard to international commodity agreements or arrangements and in due time making further assessments in the context of their own objectives as to the feasibility and effectiveness of such agreements or arrangements.

160. At the next session, Special Commission 1 will study the projection of the future supply-demand-price of copper, nickel, cobalt and manganese. It will also consider the issue of the effects of subsidised seabed mining, which it had postponed pending the outcome of the Uruguay Round of Negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT).

C. Special Commission 2 64/

161, Special Commission 2 is mandated to prepare for the early entry into effective operation of the Enterprise - the operational *arm* of the Authority.

162, It has reached agreement on the purpose and functions of the transitional arrangements for the Enterprise. With regard to the status and structure of the institutional arrangement, consultations within the Commission resulted in three possible options. Consultations are continuing between the two major interest groups on the recommendation of a single option.

163, Special Commission 2 concluded its final reading of the working paper on the structure and organisation of the Enterprise, concentrating *on* the identification of those provisions of the Convention which called for annotations of various kinds. It will make *its* final recommendation on the subject at the next session.

164, With respect to operational options, there seems to be general acceptance, at the current stage, of the joint venture option as the preferred option for the Enterprise in its initial operations. The Commission will continue its consideration of a model joint venture contract at the next session with a view to annotating some of its provisions, Other operational options will be considered within the context of the suggestions of the Chairman's Advisory Group on Assumptions.

165. The Chairman's *Advisory* Group on Assumptions continued to review the current *market* developments in respect of nickel, copper, cobalt and manganese. It also continued its examination of a paper which had compared the main parameters of the Australian study on the economic viability of deep-seabed mining with those contained in the study done by French experts from IFREMER.

166. *At* the next session, Special Commission 2 will take up the question of the harmonisation and coordination of activities with respect to exploration and training prior to the entry into force of the Convention and in the period before seabed mining is about to begin. It will also finalize its recommendations to the plenary on transitional arrangements and annotations and continue its discussions on the operational options available to the Enterprise.

D. Special Commission 3 65/

167. Special Commission 3 prepares rules, regulations and procedures for the exploration and exploitation of the deep seabed.

168. St oompleted its first reading of part VIII of the draft regulations on prospecting, exploration and exploitation of polymetallic nodules in the area, dealing with the protection and preservation of the marine environment from activities in the Area. It also concluded consideration of draft regulations on accommodation of aotivities in the Area and in the marine environment, These rules which were based on guidelines adopted by the International Maritime Organisation (IMO) on the removal of offshore installations and structures were adapted by the Commission for application to future deep-seabed mining activities and a new revised text was produced.

169. During the summer meetings, Special Commission 3 aompleted its first reading of a working paper containing draft regulations on accounting Principles and procedures, relating to the finanoial terms of contracta between the Authority and its contractors. It agreed in general that it would be necessary to ensure, through these regulations, that the Authority gained the financial benefits to which it was entitled under the relevant provisions of the Convention. A revision of the paper will be undertaken at the next session.

170. The Commission decided that, at the next session, it would conclude its consideration of accounting principles and procedures and would take up new working papers on inspection and supervision of activities in the Area and on labour matters,

E. Special Commission 4 66/

171. Special Commission 4 prepares recommendations regarding practical arrangements for the establishment of the International Tribunal for the Law of the Sea.

172. It continued its consideration of administrative arrangements, structure and financial implications of the Tribunal, and examined a scheme to phase in the establishment of the Tribunal to serve during the initial stages of its existence. Consultations were held on the number of languages to be used by the Tribunal, on the number of Members of the Tribunal that would be required to be available at the seat of the Tribunal on a regular basis and on the structure of the registry and staffing requirements. These matters will be taken up again at the next session.

173. The Commission undertook an article-by-article reading of the revised draft Protocol on the Privileges and Immunities of the Tribunal. While a considerable number of the provisions were approved, some still require

further consultation. The Commission intends to conclude its review of the draft at the next session.

174, With regard to the revised draft Headquarters agreement between the Tribunal and Germany, the Commission in its review of the document, approved, with some exceptions, artioles 1 to 19. At the next session, it plans to complete its review of the other artioles.

175. Informal consultations were continued on matters relating to the seat of the Tribunal with a view to reconciling *divergent* opinions concerning the approaah to be taken to the requirements listed in the introductory note to the revision of the official draft Convention (A/CONF.62/L.78).

176. In addition to the issues referred *to* above, the Commission will, at the *next* session, also consider elements of supplementary arrangements between the Tribunal and the International Court of Justice; other issues related to the seat of the Tribunal; initial financing of the Tribunal; relationship arrangements between the United Nations and the Tribunal) principles governing the relationship agreement between the Tribunal and the Authority; and issues relating to the draft report containing recommendations for submission to the Meeting of States Parties regarding practical arrangements for the establishment of the Tribunal.

PART TWO

ACTIVITIES OF THE OFFICE FOR OCEAN AFFAIRS AND THE LAW OF THE SEA

I. INTRODUCTION

177. By its resolution 45/253 of 21 December 1990, the General Assembly adopted a new Medium-Term Plan for the Period 1992-1997. 67/ Within that Plan, Programme 10: Law of the Sea and Ocean Affairs, provides a new subprogramme structure of activities for implementation by the Office for Ocean Affairs and the Law of the Sea which covers - within a coherent framework - the legal, political, economic, environmental, scientific and technical aspects of the Convention on the Law of the Sea and the implications of its implementation by States in terms of needs and opportunities. As requested by the General Assembly in paragraph 9 of its resolution 44/26, the plan takes into account the prospective entry into force of the Convention and the increased needs of States for assistance in implementation of the Convention. It also addresses the additional responsibilities of the Secretary-General upon entry into force of the Convention, the servicing of the intergovernmental bodies to be convened, including the Commission on the Limits of the Continental Shelf, and the functions flowing from the relationship to be established with the International Seabed Authority and with the International Tribunal for the Law of the Sea.

178. Adoption of the 1992-1997 Plan culminates a process initiated by the General Assembly eight years ago when, by its resolution 38/227 of 20 December 1983, it adopted a major programme that included within a single chapter of the medium-term plan, the activities of the United Nations in marine affairs. This important step in linking the diverse activities of the United Nations in this field was followed by the organizational and programmatic consolidation of marine affairs activities at the United Nations in the Office for Ocean Affairs and the Law of the Sea. That Office has submitted its proposed programme budget for 1992-1993 - the first to be formulated within the framework of the 1992-1997 medium-term plan - to the General Assembly at its current session for approval.

179. In 1991, the activities identified in the report of the Secretary-General on Law of the Sea for 1990 (A/45/721, paras. 173-175) have been continued, with the provision of information, advice and assistance primarily to States and also to global and regional bodies of the United Nations system and to other regional and subregional organizations and to academic institutions, scholars and other users. Measures have continued to be taken to facilitate a better understanding by States of the Convention, to assist States in ratifying or acceding to it and to promote the wider acceptance and implementation of its provisions, including the matter of establishing national legislative frameworks in conformity with the Convention, that would secure for them the extended maritime areas of sovereignty and national jurisdiction under the new legal regime and assist them in exercising their

right8 and fulfilling their obligations under the Convention, so that they may harness the benefits therefrom,

180. To this end, the programme ha8 continued to prepare studies and analyses for publication relating to specific technical issues arising *from* the Convention and to provide methodological approaches and formulate guidelines for integrated ocean management, marine policy-making and programme development. In addition, services have been provided to intergovernmental entities in preparing for the entry into forae of the Convention and for the commencement *of* the functioning of the two international organizations established by the Convention, namely, the International Seabed Authority and the International Tribunal for the Law of the Sea.

181, The General Assembly *ha8* annually reviewed the implementation of the mandatea, and has reiterated *and* supplemented them, based *on* annual report8 of the Secretary-General to the Assembly, presented at it8 *request.*

182. In support Of it8 activities, the Office continue8 to monitor and analyse development8 related to the new ocean regime at the global, regional, subregional and national levels. These functions require continuing research and data and information collection and evaluation, which are supported, among other means, by the convening of group8 of technical expert8 on specialized subjects and by developing the Office's reference library and its Law of the Sea Information System,

183. *As* the focal point for marine affair8 within the United Nations, the Office also ha8 continued to participate in and support inter-agency programmes and activities, a8 well a8 inter-agency coordination activities and mechanisms, with a view to promoting cooperation in area8 of common interest and a consistent approach toward8 the new regime for the oceans.

184. In summary, a8 the 1990-1991 biennium come8 to a close, the programme on Ocean Affair8 and the Law of the Sea is, a8 stated in the medium-term plan for 1992-1997, "poised to advance the work *of* the organization in responding to the *need8 of* Member State8 . . ." in dealing with all aspects of the law *of* the sea and marine affair8 (para. 10.6).

II. SERVICINQ THE PREPARATORY COMMISSION

185. In 1991, in addition to a number of meeting8 of the subsidiary organs, there were 100 meetings of the main organ8 of the Preparatory Commission, which included 7 formal meeting8 of the Plenary, 14 meetings of the Plenary as a Working Group on the organ8 of the International Seabed Authority, and between 15 and 21 meetings for each of the four Special Commissions.

186, The secretariat continued to prepare studies and working paper8 *on* several issues before the Preparatory Commission. The working papers and studies included: a revised draft agreement concerning the relationship between the United Nations and the International Seabed Authority) a revised

paper on the Finance Committee; international commodity agreement8 or arrangements; criteria *for* the identification of land-baaed producer States actually or likely to be *affeated* by seabed produationr draft regulation8 on the Accommodation of Activities in the Area and in the Marine Environment and on Accounting Principles; a revised draft protocol on the Privilege8 and Immunities of the International Tribunal for the Law *of* the Sea; and issues concerning the initial financing and budget of the International Tribunal for the Law of the Sea.

III. ADVICE AND ASSISTANCE

A, Direct assistance to Governments and intergovernmental organizations

167. The need8 of State8 and intergovernmental organisations *for* assistance, direct *or* otherwise, for developing and managing their ocean resources are well dooumented in the report submitted by the Secretary-General to the General Assembly at it8 forty-fifth session in 1990 68/ under it8 item on law of the sea. These needs, identified on the basis of information provided by Governments, intergovernmental organizations and organisation8 of the United Nations system, at the request of the Secretariat, *are* comprehensive and diverse. As the above-cited report note8 "... although the Convention confers rights under which State8 may explore and exploit ocean resources, these rights have not, in aotual *fact,* been translated into tangible or substantial benefit8 for most." (para. 12). In this connection, at it8 forty-fifth session in 1990, the General Assembly expressed concern that "... the developing countries are a8 yet unable to take effective measures for *the* full realisation of these benefit8 owing to the laak of resources and of the necessary scientific and technological capabilities" (A/45/145, thirteenth paragraph).

188. The report submitted to the General Assembly at it8 present session (A/46/722), also based on information provided by States, intergovernmental organisation8 and organisation8 of the United Nation8 system, advances the approaah taken in the 1990 report by describing measures currently being taken to meet identified need8 and setting forth the scope and types of additional measure8 that are still required. 69/

189. *In* 1991, direct assistance provided *to* State8 and intergoverumental organizations by the Offiae *for* Ocean Affair8 and the Law of the Sea included the following activities.

190. The Offiae continued its long-standing assistance to the Indian Ocean Marine Affair8 Cooperation (IOMAC) secretariat. Since 1985, IOMAC, comprising the Asian and African State8 bordering the Indian Ocean and other State8 active in the region, has conducted a number *of* activities such a8 training programme8 and technical workshops of considerable benefit to participating Governments and the region, under the IOMAC Programme initiated by the first Conference in 1985. The 7th meeting of the Standing Committee held in

"Colombo, Sri Lanka, in July 1991, emphasized that the growing dependence on marine resources of a major part of the population of Asia and Africa which borders the Indian Ocean warranted an early response to the need8 of these States through a" comprehensive programme of assistance from the United Nations. It also stressed the need for the United Nation8 to proceed to early implementation of a practical programme of assistance to developing countries for harnessing the marine-resource potential, using dedicated regional institutions ruah as IOMAC a8 the means of delivery for any future global and regional programmes of assistance. The meeting was attended by 28 States and 12 international organizations, including UN/OALOS.

191. In relation to the Zone of Peace and Cooperation of the South Atlantic, the General Assembly, at it8 forty-fifth regular session, took note of the report of the Secretary-General on this subject *(A/45/653)* and the discussions it held on this agenda item, and on 27 November 1990 adopted resolution 45/36 in which it again "welcomes with appreciation the assistance that the Office for Ocean Affair8 and the Law of the Sea of the Secretariat and the United Nation8 Development Programme have extended toward8 the convening by the State8 of the zone of a seminar of a group of experts held at Brazzaville, from 12 to 15 June 1990 ... and look8 forward to the convening of the second seminar on the subject in Uruguay in 1991, particularly with a view Of it8 indication of specific area8 for co-operation by the State8 of the zone, on all common marine programmes" (para. 7).

192. In accordance with the programme agreed upon, the 2nd meeting of the Group of Experts of the State8 Member8 of the Zone of Peace and Cooperation of the South Atlantic was held in Montevideo, Uruguay, from 3 to 6 April 1991, with designated experts attending from 17 African and Latin American State8 of the South Atlantia. Representatives of the Economic Commission for Africa and of the Economic Commission for Latin America and the Caribbean a8 well a8 representatives of IOC and UNBP also attended the meeting.

193. Discussions focused on 4 area8 of cooperation, namely: marine legislation; policy and planning) ocean-resource development and marine science and technology; protection and preservation of the marine environment; and development of skills and capabilities in the marine sector. The recommendation8 of the Expert8 were taken into account in the preparation of, and are reflected in, the report of the Secretary-General referred to in paragraph 191 above.

194. The Permanent Commission of the South Pacific (CPPS) organized and convened, with the co-sponsorship of OALOS, the Organization of American State8 (OAS) and ECLAC, a meeting *of* Legal Expert8 on Latin America on the Convention on the Law of the Sea, which was held at ECLAC headquarter8 in Santiago, Chile, from 13 to 17 May 1991. Seventeen experts, acting in their own capacity, attended the meeting, The purpose *of* the meeting was to make an assessment of the degree of implementation of the Convention on the Law of the Sea in Latin America and to consider the present possibilities for obtaining universal participation in it. The meeting produced a final report containing the conclusions reached during the debate and the recommendations made. Background papers were provided by OALOS.

195. The Office ha8 continued to support the initiative8 taken by the 1989 Ministerial Conference on Fisheries Md Cooperation among African State8 bordering the Atlantic Ocean. A meeting of the follow-up Committee of the Conference, held in Morooao in May 1990, affirmed the continuing need for support by the Office. In 1991, this assistance took the form of a contribution to the preparation of a regional draft Convention on Fisheries Cooperation among African State8 bordering the Atlantic Ocean.

196. The Second Session of the Ministerial Conference, meeting in Dakar from 4 to 5 July 1991, formally adopted the Convention. At the Conference, 4 States - Morocco, Senegal, Togo and Zaire - Signed the Convention and 14 State8 signed the Final Act. The Conference also decided to establish it8 secretariat in Morocco and to convene it8 third session in 1993.

197. Under a URDP-funded project, the Qovernment of Côte d'Ivoire in 1991 requested the Offioe to assist in reviewing its marine policy in order to maximise the benefit8 of the development of marine resources and uses.

B. Advice, special studies

198. Of partiaular importance for States when they undertake legislative and policy reviews that are essential steps in the process Of *ratifying* the Convention are specialized advice and assistance related to the law of the sea and ocean affairs. This includes the alarifiaation of various provisions of the Convention as they relate to the right8 and duties of State8 *and* analyses of the implications of the Convention for individual States, taking account of their geographical situation, legal and political systems, and economic circumstances. The Office ha8 aontinued to provide such advice and assistance in response to the request of State8 and intergovernmental and other organizations.

199, Thus, the Office ha8 provided substantive advice and ha8 prepared document8 and studio8 for meeting8 of governmental, intergovernmental and non-governmental bodies and organizations outside the United Nations system. In 1991, in addition to such meeting8 mentioned elsewhere in this report, these meeting8 included: the Annual *Conference* on Solid Waste Management and Material8 Policy, the New York State Legislative Commission (New York); the Conference on "Issues in Amending Part XI of the Law of the Sea Convention", Center for Oceans Law and Policy (Washington, D.C.); the Meeting of the Board of General Commissioners for the Specialised International Exhibition, "Christopher Columbus' Ship8 and the Sea" 1992 (Genoa, Italy); the International Expert Meeting on Land-based Source8 of Marine Pollution, (organised by the Qovernment of *Canada* for UNCED) (Nova Scotia, Canada); 70/ the North Pacific! Scientific Driftnet Review Meeting: Qovernment of Canada (Sidney, British Columbia)) the Twenty-Fifth Conference: Law of the Sea Institute (Hawaii), "The Marine Environment and Sustainable Development: Law, Policy and Science" (Malmo, Sweden), the Twentieth Annual Session's Meeting of the Technical Advisory Qroup of SOPAC and related meetings (Port Vila, Vanuatu); and the Meeting of Pacem in Maribus XIX: International Ocean

Institute (101) "Ocean Governance: National, Regional and Qlobal Level" (Lisbon, Portugal).

C. Training and fellowships

200. The activities of the Off ice in the aontext of training and fellowships reflects the fact that the Convention provides a comprehensive legal f ramework.

201. In the field of integrated ocean management and a8 part of a longstanding cooperative endeavour, the Office has continued to assist the World Maritime University in it8 on-the-job training efforts by receiving selected groups Of students and briefing them on the *work* of the United Nation8 in ocean affair8 and the law of the sea.

202. Also, the Office ha8 continued its substantive association with the conduct of the annual "Marine Affair8 II Seminar1 Sea-Use Planning *and* Management", which was held at the World Maritime University from 20 to 25 October 1991.

203. Once again in 1991, the Department of Public Information of the United Nation8 Secretariat requested the Office to prepare and conduct an action-oriented seminar and simulation exercise entitled "Environment and Development : the Role of the Oceans". This activity took place at United Nation8 Headquarters from 25 to 27 June 1991.

204. To facilitate research and study on the law of the sea, it8 implementation, and related marine affairs, OALOS offer8 annually the Hamilton Shirley Amerasinghe Memorial Fellowship on the Law of the Sea. The fellowship provide8 all facilities, including travel costs and subsistence allowances, at one of the participating institutions, and thereafter, for internship with the Office.

205. This year's annual fellowship award, which is the fifth, was made to Ms. Maria de Lourdes Pins Aguiar, a jurist with the Legal Division of the Ministry of Foreign Affair8 of Sao Tome and Principe. She will do her fellowship-in-residence programme at the Qraduate Institute of International Studies in Geneva under the supervision of Professor Lucius Caflisch. This will be followed by the usual period of internship with OALOS.

208. The award was made on the basis of the review of candidate8 by the Advisory Panel, which met on 4 December 1990. The recommendation was conveyed to the Special Representative of the Secretary-General for the Law of the Sea, Mr. Satya N, Nandan, by the Panel's Chairman, Ambassador Andre8 Aguilar, Permanent Representative of Venezuela to the United Nations.

207. Nominations and application8 from numerous applicant8 in various countries were again received this year, owing to the continued interest in the programme and the publicity given to it. However, Prevailing economic factor8 concerning the Fellowship Trust Fund have not made it possible to

accommodate more than one fellow per year. As the Office continued its efforts to obtain additional funding and to seek assistance from funding programmea, it would welcome contributions to the Trust Fund from Member States, philanthropic institutions, and others. The Office would also appreciate it if countries whose applicants are selected for the reserve list could assist suah candidates on a partial basis. The modalities of such assistance oould be worked out between euah a country and OALOS.

IV, PUBLICATIONS AND MONITORING AND ANALYSIS OF DEVELOPMENTS

A. Legislative history, State practice and technical guides

208. The publiaation of legislative histories and studies of State practice are viewed by the Office as important instruments in promoting the uniform and consistent appliaatioa of the Convention on the Law of the Sea. Legislative histories - whioh are both descriptive and analytiaal in content - trace the often complex development of provisions of the Convention as they now exist and thus, by providing a better understanding of thoae provisions, assist States to formulate national legislation that is consistent with the new legal regime and supportive *of* national poliay and objectives in the marine sector. Legislative histories of pollution by dumping; the right of access by land-looked States to and from the sea and freedom *of* transit; the regime of islands; navigation on the high seas) and arohipelaqic States have already been published. Work is well advanced in 1991 for the publiaation in 1991 or 1992 of three further legislative histories - artificial islands and installations; passage through straits used for international navigation; and the exclusive economic zone. Work also commenced on legislative histories of the continental shelf, the conditions for marine scientific research, the common heritage concept, and access to living resources of the exclusive economic zone.

209. Complementing these legislative histories are two other publications. The first, to be publiehed in 1991, is the first volume in an eleven-volume series containing the offiaial documentation of the Preparatory Commission for the International Seabed Authority and for the International Tribunal *for* the Law of the Sea at its first session in 1983. The 10 volumes to follow will cover *the* sessions of the Preparatory Commission through 1990 (second *to* eiqhth sessions) and will provide a cumulative index for the entire period,

210. Also under preparation is a compendium of Drafting Committee documents, which will include the official documentation of the Drafting Committee of the Third United Nations Conference on the Law of the Sea, and thus will help to provide an enhanced understanding of the various provisions of the Convention.

211. Publication of studies on State practice are intended to record and analyse what States are doing in the light of provisions of the Convention. Such studies thus assist States in comparing their existing legislation and prospective leqialative enactments with the related provisions of the Convention. Studies on State practice also enable States to compare their own

legislative development with that of other States in relation to specific provisions or parts of the Convention, a process that encourages uniformity in approach, while taking account of differences in national circumstances. Previous publioationr of studier on State praotioe have aovered suoh subjects as national legislation on the ● xalurfve eoonomio zone; maritime boundary agreements; the continental shelf; marine scientific research; and two special publioationr on State practice that provide an overview of current developments, including recently adopted treaties - multilateral as well as bilateral - national leqislation available to the Office, and communications from States in regard to the new regime for the oceans.

212. In 1990, the Office issued three additional publications on State practioe - one dealing with the establishment of straight baselines and including ● xoorptr of national laws, aaoompanied by maps attaahed for illustrative purposes; and another comprising a repertory of international agreements relating to Sections 5 and 6 of Part XII of the United Nations Convention on the Law of the Sea, dealing with the proteotion and preservation of the marine environment and a aompilation of Maritime Boundary Agreements oovering the period 1942-1969. During the period under review, work had been oompletad for three further volumes dealing with Maritime Boundary Agreements (1985-1991); national claims to maritime jurisdiction (excerpts of leqislation and table of claims to maritime zones); and archipelaqio States. Work has alro commenced on State practioe relating to national legislation for the protection and preservation of the marine environment and on State practice concerning legislation for ooastal area management.

213. In view of the fact that some provisions of the Convention are of a highly technical nature, the Office has Provided assistance to States in understanding those provisions and in alarifyinq, as required, their underlying intent and practical implications. Thus far, this has been done through the preparation of handbooks on baselines and on the regime for marine scientific research in areas under national jurisdiction. In each case, the publication took account of the results of groups of experts meetings on the subjects.

214. In 1991, another topic warranting special attention - the regime of high-seas fisheries under the Convention - was examined by an expert meeting convened by the Office, The Office expects to issue a technical publication on this subject, which will take aaaount of the aonalusions of the expert meeting.

B. Bulletins, annual reviews, circulars

215. Further issues of the Law of the Sea Bulletin have been published during the period under review. Numbers 16, 17, 18 and a special issue No, 3 have been distributed.

216. The Bulletin is viewed by States and intergovernmental bodiea and academia inatitutiona as a moat useful vehicle for keeping abreast of important developments. It allows them to monitor in a timely manner the practice of States, It provides Governments with the *moat* recent legal material relevant to the law of the sea - including, in particular, national legis?ation, bilateral agreement8 and multilateral treaties, as well as information on decisions of the International Court of Justice, arbitral tribunal8 or other dispute-settlement proaedurea - and periodic updates on the status of the Convention, with tables of ratifiaationa, texts of deolarationa and objection8 to dealarationa or atatementa made in *aaoordanoe* with articles 287, 298 and 310. Every year, one issue of the Bulletin oontaina a special chapter devoted to the annual *work* of the Preparatory Commission (No, 17, April 1990). It presents a report on the work of the bodies of the Commission and when appropriate reproduces the texts of decisions adopted by the Commiaeion and provides the liat of doaumenta under consideration; it lists member States, observers and participants. More *than* 1,500 aopiea in English, French and Spanish of saah issue are circulated to meet a demand that is growing every *year.*

217. The next two volumes in the series Annual Review of Ocean Affairs: law and policy, main documents, which will be published by the United Nation8 in 1992, will trace, through the documentation of intergovernmental orqaniaationa, the main development8 in international law and policy relating to *ocean* affairs and the law of the sea during the years 1989 and 1990. Former volumes aovered the period 1985-1988 and were published by UNIFO Publishera, Ltd.

218. Also, work is near aomplation for tha publioation of an annotated directory of international organizations with competence in marine affairs within the aontext of the Convention *on* the Law of the *Sea.*

213. The Office aontinuea circulating periodically current and up-to-date information on national and international developments relating to oaaan affairs and the law of the aea to other offices and departments of the Organisation concerned with ocean-related activities and those connected with peace and securiry in relation to the uses of the aeaa.

c . Law of the Sea Information Systems and Library

1 . Law of the Sea Information Systems (LOSIS)

220. The Office has proceeded with the further development of its computerized Law of the Sea Information Systems (LOSIS). These systems are composed of *a* group of databases, each containing information relating to the different aspects of the law of the aea. These are currently being supplemented by *the* collection of additional marine-related data (see A/42/688, A/43/718, A/44/650 and A/45/721 for details of the databasea). LOS18 continues to be used as a source *on* information and data within the Office and to respond to requests from other agencies, national Governments and others.

221. Of these databases, the Country Marine Profile Database (MARPRO), has 98 categories of information for more than 240 countries and other entities and has been updated to incorporate recent developments within the United Nations.

222. As repotted laat year. all ourrently available references to leqialation and regulations have been coded into the National Marine Legislation Database (LEGISLAT), whioh oompriaea aome 4,000 entries. The oontinuinq next phaae is verification *and* updating these entries with Governments as to aoouraoy and completeness. Computer filets containing relevant extracts of text of the appropriate aformentioned LEGISLAT entries are being entered into the LOSIS oomputmrr ao as to allow for some retrieval of specified relevant textual items. The Office would urge all Member States to forward, a8 soon as available, any new marine-related leqialation so that it can be included in LEGISLAT.

223. The Minerals Database (MINDAT) presently contains 25 aateqoriea of information on copper, nickel, manqaneae and cobalt, by country and globally covering production. consumption, import and export of the minerals in various forma, for the period 1971-1986. It is being maintained on a timely manner.

224. Updated information, through 1990, has been inaluded in the PRODAUTH database whioh deals with the produotion ceiling for seabed-mining provisions of the Convention and is used by the Preparatory Commission in its ongoing analyaia of deepsea-minerals prices, production and consumption.

225. The Library Biblioqraphio Information System (LIBRIS) is now operational while further development continues. This database comprises all holdings of the Law of the Sea Library and la indexed aaoordinq to several fields inaludinq author, title and subject. An additional bibliographic tool soon to be available in the Office la a CD-ROM ayatem for extracting Aguatia Sciences and Fisheries Abatraota (ASFA) aitationa and abstracts for the period 1982 to present. The system will allow for multi-level searches by author, subject, qeoqraphio area and for on-screen review or printout of an entire aearah or a subset of it.

2. Law of the Sea Library

226. The specialised Law of the Sea Library and reference collection continues to be atrenqthened by the aaquiaition of the moat recent publications in the field of law of the aea and marine affairs, which includes scientific and teahniaal publications. Since 1990, the services of this *reference* Library have been expanded by the continued development and updating of a computerized database especially designed to contain all the holdings of the Library.

227. As in the past, this reference Library continues to serve the needs of Member States, Permanent Missions to the United Nations, Secretariat staff and researchers from academia inatitutiona which are interested in all aapecta of the Convention on the Law of the Sea and its related field of marine affairs. The Library also provides reference materials for consultation in relation to the implementation of the Office's work programme.

228. The OALOS Office also maintains a law of the sea reference library at Kingston, Jamaica, in order to facilitate the servicing of the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea.

3. Select Bibliographies on Ocean Affairs and the Law of the Sea

229. The Law of the Sea Library and reference collection publishes an annual bibliography on law of the sea and marine affairs. The sixth bibliography in this series: The law of the sea: a select bibliography - 1990 waa published in 1991 (United Nations publication, Sales No. E.91.V.2). The seventh bibliography (1991) will be publiahed in early 1992.

230. In 1991, a 20-year aompilation of bibliographical entries referring to English and French material was published by the Office under the title: The law of the sea: a bibliography on the law of the sea 1965-m (United Nations publication, Sales No. E/F.91.V.7). It is expected that another aompilation of bibliographic entries for material in German, Italian, Russian and Spaniah will also be published.

V. COOPERATION WITHIN THE UNITED NATIONS SYTEM

231. As it has done in the past in its annual resolutions on the Law of the Sea, the General Assembly at its forty-fifth session drew attention to the importance of cooperation among the organs and organizations of the United Nation8 system by inviting them "to cooperate and lend assistance to State8 . . . in the implementation of the Convention and in the development of a consistent and uniform approach to the legal regime thereunder, as well as in their national, subregional and regional efforts toward the full realiaatioa of the benefits therefrom" (A/45/145, para. 12). The General Aaaembly also requested "the competent international organizations, the United Nations Development Programme, the World Bank and other multilateral funding agencies, in accordance with their respective poliaiea, to intensify financial, technological, orqaniaational and managerial assistance to the developing countries in their efforts to realize the benefits of the comprehensive legal regime established by the Convention and to strengthen cooperation among themselves and with donor States in the provision of such assistance" (ibid., pare. 14).

232. Under the above-mentioned resolution and those of previous years, which have emphaaiaed the importance of cooperation with the United Nation8 ayatem, OALOS has continued its close cooperation with, and assistance to, United Nations agencies and bodies, and other departments of the United Nations, In 1991, specific examples of such cooperation may be cited as follows.

233. In relation to specific joint activities and programmes, the Office has continued its co-sponsorship of and participation in the Joint Group of

Experts on the Scientific Aspects of Marine Pollution (GESAMP) which held its twenty-first • ℳ☺☺⋊□■ in February 1991 and together with IMO has supported the work of GESAMP Working Group No. 29, which in 1991 completed its aaaiqned taak - to develop a oomprahenrive framework for aaaeaament and regulation of waste diapoaal in the marine environment. The Office also has continued its co-sponsorship, together with the IOC of UNESCO, of a joint Programme on Ocean Science in Relation to Non-Living Resources (OSNLR) and its co-aponaorahip of the joint UN/FAO/IOC Aquatic Sciences and Fiaheriea Information Syatem (ASFIS). In this latter context, the Office is cooperating with other United Nations orqaniaationa to develop meaaurea and aativitiea aimed at improving marine information management within the United Nations system.

234. As an international aoordinatinq input for Aquatic Sciences and Fiaheriea Abatraota (ASFA), the major informational module of *ASFIS*, the Office has continued to support development of this inter-agency biblioqraphical information service. In this connection, it monitors documents and publioationa relating to the law of the sea and other marine-related activities from which abetrsata Md biblioqraphical data are prepared for inclusion in the ASFA computer-searchable databaae and the corresponding *ASFA* monthly journals. The Office participated in the twenty-first session of the ASFA Advisory Board, held at Rome, Italy, from 17 to 21 June 1991.

235. The Office has been cooperating with the secretariat for the United Nations Conferanoe on Environment Md Development (UNCED) in the preparation, jointly with the relevant agencies and bodies as appropriate, of several background reports and a aet of recommendations for action on the topic of "protection of the oceans, all kinds of seas including enclosed and semi-enclosed seas, ooaatal areas and the protection, rational use and development of their living resources". These papers were submitted through the secretariat to the third aeaaion of the Preparatory Committee for UNCED in August 1991. For thia purpose, the Office participated in a series of meetings of the inter-agency working party convened by the UNCED secretariat, as well as the two aeaaiona of the Preparatory Committee in 1991. In addition, it participated in the UNEP-organized Second Meeting of Senior Governmental Officials Expert in Environmental Law (Rio de Janeiro, Brazil). As inter-aqenay cooperation within the context *of* preparations for UNCED waa close and extensive *and* provided numerous opportunities for discuaaion of other matters of common interest, additional inter-agency meetings in 1991 within the framework of the Inter-Secretariat Committee on Scientific Programmes Relating to Oceanography (ICSPRO) or Ad Hoc consultations were not held.

238. At its meeting from 17 to 19 April 1991, the Administrative Committee on Coordination decided that the aqenciea and bodies within the United Nations aytem ahould participate in the International Specialised Exhibition, Genoa 1992 "Christopher Columbus : Ships and the Sea" jointly under a common topic, and requested the United Nations to serve as liaison between the Exhibition organiser and the participating agencies and bodiea. The Special Representative of the Secretary-General for the Law of the Sea has been designated as the United Nations Organizations Coordinator. He la currently

coordinating the preparatory work of sixteen agencies and bodies which have decided to participate under the main theme "The Oceans - Our Future".

237, The Office also participated in and contributed substantively to an Expert group Meeting on the Establishment of a Caribbean Regional Centre for Marine Industrial Technology (December 1991). The objectives of the meeting, which was convened within the framework of UNIDO's programme on advanced technologies and UNEP's Caribbean Environment Programme (CEP), were to assess marine industrial technology needs and capabilities in the Caribbean) to assess the views and comments of Caribbean countries on the establishment of a Caribbean Centre for Marine Industrial Technology; to advise on a strategy for the establishment of a Centre and development of a Regional Programme to be implemented by it; and to make recommendations to UNIDO, as well as other cooperating international organisations and interested Caribbean aouatries on subsequent steps.

238. In addition, the Office was represented at and made contributions to the nineteenth session of the FAO Committee on Fisheries (8-12 April, Rome); the 9th meeting, Monitoring Committee on the Action Plan for the Caribbean Environment Programme) Special Meeting of the Bureau of Contraating Parties to the Convention on the Protection and Development of the Marine Environment of the Wider Caribbean Region (13-15 June, Kingston, Jamaica)) and the meeting of Legal Experts on Revision of Guidelines *for* Maritime Legislation (14-18 October, Bangkok, Thailand),

Notes

1/ Acceded to the United Nations Convention on the Law of the Sea.

2/ Ibid,

3/ Note should be taken of a proposal submitted by Austria, Cyprus, Finland, Liechtenstein, Malta, San Marino, Sweden, Switzerland and Yugoslavia at the CSCE Negotiations on Confidence and Security Building Measures at Vienna in 1989. It encouraged participating States to inform other participating States of their intention to exercise the right of innocent passage of warship through their territorial sea (CSCE/WV.5).

4/ See William L. Schachte, Jr., "The value of the 1982 United Nations Convention on the Law of the Sea - Preserving our Freedoms and Protecting the Environment", presented at the Twenty-fifth Annual Conference of the Law of the Sea Institute.

5/ See for example Boundary Delimitation Treaty between the Republic of Venezuela and the Kingdom of the Netherlands (31 March 1978).

6/ Application filed in the maritime delimitation and territorial questions between Qatar and Bahrain (Qatar v. Bahrain).

Notes (continued)

7/ Judgment was reported in document A/45/721/Corr.1.

8/ See report of the Secretary-general, A/45/721, paras. 26-28.

9/ Documents A/AC.109/1045 (Ind), 1045/Add.1 (Ind), A/45/549 (Port), A/46/93-8/22249 (Port).

10/ A/46/131.

11/ Portugal maintains that the boandary of the continental shelf is the median line, in accordance with the 1958 Geneva Convention, to which both aountriee are Parties. The joint development zone under the Treaty straddles the median line (A/46/97-S/22285).

12/ For instance a European Parliament resolution of 17 May 1991 lists as a basic principle of Community security policy for the Mediterranean region, the importance of free movement of shipping in the Mediterranean and the Persian gulf (A/46/523).

13/ See, for example, Disarmament Topical Papers 6, Confidence-building Measures in the Asia-Pacific Region, United Nations publication, Sales No. E.91.IX/16.

14/ See document A/46/410.

15/ Another instance where States have agreed to avoid conflicting activities in congested areas, as well as in or near international straits, is the requirement under IMO Guidelines that decommissioned offshore structures be entirely removed. See 1988 report (A/43/718, paras. 57 to 63).

16/ Document A/46/596.

17/ United Nations Seminar on Confidence-building Measures, Vienna, February 1991.

18/ The International Maritime Dangerous Goods (IMDG) Code includes a section on radioactive materials, based on the principles of IAEA Regulations for the Safe Transport of Radioactive Materials (amended 1990).

19/ Fifteen incidents confirmed, 4 known to involve no release. A further 16 cases remain unconfirmed. Four lost nuclear subs confirmed since 1963 - all in the Atlantic; 4 nuclear-powered spacecraft above the sea; a number of incidents involving loss of nuclear weapons and materials; and one accident involving a merchant ship carrying nuclear cargo. The IAEA database has modules on accidents and losses at sea, sea disposal operations, and low-level radioactive liquid releases from nuclear installations.

20/ See Parts XIII and XIV of the Convention.

Notes (continued)

21/ The Montevideo Programme of International Environmental Law is to be revised and expanded by an expert meeting in October, convened by UNEP. Since it wan formulated before the adoption of the Convention on the Law of the Sea, special attention will be given to its proper reflection in the new Programme.

22/ MEPC.49(31).

23/ Proposal of France in NAV 37/14/3. Some States have already imposed reporting requirements, e.g. Netherlands Shipping Traffic Act. Some States have combined IMO-approved traffic separation schemes with an inshore vessel traffic service (VTS).

24/ See the 1989 report, A/44/650, para. 57, and the 1990 report A/45/721, para. 92, on the Caribbean Protocol.

25/ For declarations on the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, see pares. 10-13 of the 1990 report, A/45/721. A number of declarations, included in the Final Act of the Conference, referring to law of the sea issues were made at the time of adopting the 1989 Easel Convention: by Japan, the USSR, the United States, Colombia, Mexico, Portugal, Uruguay, Venezuela, and German Democratic Republic. Note also United States Bill for the implementation of Basel Convention clarifies that "movement through the territorial sea of a country consistent with international navigation rights and freedoms shall not, by itself, imply that such a country is a transit country".

26/ See para. 83 of the 1990 report, A/45/721.

27/ See C/ES 16/5/Add.1. The request was made by the United States of America (LEG 65/7).

28/ MBPC 31/21/Add.1.

29/ Existing special areas under MARPOL Annex I (oil): Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, the Gulfs, the Gulf of Aden, Antarctica. Under MARPOL Annex II (noxious liquid substances): Baltic Sea and Black Sea. The addition of Antarctica has been approved in principle. Under Annex V (garbage): Mediterranean Sea; Baltic Sea, Black Sea, Red Sea, the Gulfs, North Sea, Antarctica, Wider Caribbean (corresponding to the area of the Cartagena Convention, and according to a phased subregional approach, beginning with the Gulf of Mexico).

30/ The Guidelines, para. 1.3.7.

31/ Ibid., para. 1.3.14.

32/ See articles 22, 41 and 53 of the Convention on the Law of the Sea.

Notes (continued)

33/ See para. 102 of A/45/721.

34/ The 1991 Bamako Convention includes a provision to "control all carriers from non-Parties** as a means to prohibit ocean dumping of hazardous wastes in the territorial sea and exclusive economic zone. The next meeting of the Parties to the Barcelona Convention to be held in October 1991 will discuss a draft protocol for the Mediterranean, covering shipment and disposal of wastes.

35/ Note also that piracy and armed robbery at sea and in port is a continuing problem: 259 such incidents took place over a one-year period. IMO will now circulate quarterly circulars containing reports of incidents.

36/ 1990 Annual Report of the Institute of London Underwriters. It also shows a wide variation in the loss ratios of fleets, the worst being 114 times that of the best in fleets of 2 million tons or more.

37/ The Assembly will also be asked to approve a schedule for phasing out existing single-hull tankers and introducing the new requirements, and to approve interim rules.

38/ The Annex to the Convention deals with questions of reimbursement for costs incurred by nations that provide emergency assistance. While there is no provision on the *'polluter pays" principle, it is upheld in the preamble to the Convention.

39/ Given the complex demands of MARPOL, close cooperation has now been established between MOU countries and Parties to the 1983 Bonn Agreement for Cooperation in dealing with Pollution of the North Sea by Oil and Other Harmful Substances, in order to provide early notification of incidents to port-control authorities. MOU Members have also broadened their contacts to include Members of the Barcelona and Helsinki Conventions.

40/ See articles 217, 218 and 220 of the Convention on the Law of the Sea.

41/ See e.g. MSC 59/21/1.

42/ Developments with respect to large-scale pelagic driftnet fishing are presented in the report of the Secretary-General (A/46/615 and Add.1).

43/ FAO Species Identification Sheets for Species of Interest to Fisheries and the FAO Species Synopsis Series provide the necessary tools.

44/ See COFI/91/7.

45/ Economic factors are beginning to receive more attention at the regional level also, e.g. WECAFC establishment of a Working Party on Fishery Economics and Planning.

Notes (continued)

46/ FAO Fish. Rep. No. 431, Suppl.

47/ The new guidelines follow the format of the previous Standard System for the Marking of Fishing Vessels, and are also intended to be used firstly on a voluntary basis. Guidelines in NAV 37/INF.9; Report of Consultation in NAV37/INF.8.

48/ See NAV 37/6/1.

49/ The Community is one of the largest fishery managers in the world (annual catch from its EEZs is 8 per rent of world totalt total fleet is more than 65,000 vessels).

50/ It may be noted that European Court of Justice in July 1991 ruled that United Kingdom legislation, designed to prevent "quota hopping" through restrictions on registration of fishing vessels, was incompatible with the Traaty of Rome.

51/ CECAF will decide in December on expanding its functions to include the formulation of scientifically-based regulatory measures and recommendations for their adoption and implementation. The 1969 ICSEAF Commission was terminated in July 1991 and no replacement is being contemplated.

52/ Similar efforts are being mad8 in other regions, as illustrated by the recent establishment of ABBAN guidelines on fisheries monitoring, control and surveillance, and the *recent* exchanges on collective security in South-East Asia which dealt also with problems of illegal *fishing.*

53/ WBCAFC session, November 1990. FAO Fish. Report No, 452.

54/ The ICCAT Convention *area* includes the Mediterranean.

55/ United Nations publication, Sales No. E.91.V.3.

56/ See *IOC* Assembly resolution XVI-16 and UNCED . . . PC/70.

57/ Resolution LDC.40(13).

58/ Parties to the Paris Convention for the Prevention of Marine Pollution from Land-baaed Sources have since agreed that this practice would constitute a potential land-based source and will therefore fall within the competence of the Convention (PARCOM Rec 91/5).

59/ Note that Oslo Commission has prepared detailed guidelines for the disposal of offshore installations at sea. LDC 14/3/4.

60/ 888 reports of the Chairman of the Preparatory Commission (LOS/PCN/L.92 and LOS/PCN/L.97).

Notes (continued)

61/ LOS/PCN/BUR/R.7 and Corr.1 and LOS/PCN/117.

62/ LOS/PCN/BUR/R.8 and LOS/PCN/122.

63/ See reports of the Chairman of Special Commission 1 (LOS/PCN/L.88 and LOS/PCN/L.93).

64/ See reports of the Chairman of Special Commission 2 (LOS/PCN/L.90 and Corr.1 and LOS/PCN/L.95).

65/ 888 reports of the Chairman of Special Commission 3 (LOS/PCN/L.89 and LOS/PCN/L.94).

66/ See reports of the Chairman of Special Commission 4 (LOS/PCN/L.91 and LOS/PCN/L.96).

67/ A/45/6/Rev.1.

68/ A/45/712. Law of ths Sea: Realization of the benefits under the United Nations Convention on the Law of the Sear Needs of States in regard to development and management of ocean resources. Report of the Secretary-General.

69/ A/46/722. Law of the Sea: Realization of Benefits under the United Nations Convention on the Law of the Sea: Measures undertaken in response to needs of States in regard to development and management of ocean resources, and approaches for further action. Report of the Secretary-General.

70/ In connection with the UNCED preparations and pursuant to a decision taken by the Preparatory Committee at its first session in August 1990, the Office cooperated with the Government of Canada by providing secretariat staff and substantive input for the meeting.