If the Law of the Sea Conference were allowed to close before proposals for an integrative machinery were introduced, a unique opportunity would be lost to create a new international order in ocean space.

Summary

A reconsideration of the goals of the U.N. Conference on the Law of the Sea is urged. The efforts of the Conference should be re-focused on *the common heritage of mankind* and the building of a *new international order, including a new international economic order,* in the oceans.

In the present situation, and considering the work already accomplished by the Conference, this goal could best be advanced by the earliest possible conclusion of a Treaty clearly defining the limits of national jurisdiction, setting general norms and rules for the conduct of States in ocean space, establishing an International Seabed Authority and creating a dispute settlement system including a Law of the Sea Tribunal.

This, however, leaves serious gaps in the Law of the Sea which would frustrate rational management of ocean space and resources and the building of a new international economic order.

Therefore, together with the Treaty, a Resolution should be adopted, recommending the restructuring of the U.N. Agencies operating in ocean space and the appointment of a Committee of Experts for the establishment of Integrative Machinery.

EXPLANATORY NOTE

The purpose of this study is to analyze the Single Negotiating Text and to show how it could be further developed and integrated in an ocean management system able

(1) to cope with the multiple uses of ocean space and resources, and

(2) to advance the principles and objectives of the New International Economic Order and to create an institutional framework to embody this order with regard to the ocean environment.

Like the Single Negotiating Text, the comprehensive Convention needed for these purposes will consist of several parts. One might project four main parts:

Part I would deal with the Law of the Sea. It would have four sections. The first would deal with the limits of national jurisdiction in ocean space; the second with rights and duties of States in marine areas under national sovereignty or jurisdiction (national ocean space); the third with marine areas beyond national sovereignty or jurisdiction (international ocean space) and the rights and duties of States therein; and the fourth, with general norms concerning the rights and duties of States in ocean space as a whole. This part would include the work of the Second Committee in its entirety (Part II of the Single Negotiating Text), some parts of the work of the First Committee, and most of the Third. In other words, it would deal with the non-institutional aspects of the law of the sea.

Part II would deal with the international institutional requirements of the principal uses of ocean space and resources. When the process of building the new international order in the oceans is completed, this Part should contain the Statutes of the basic organizations charged with the management of these uses. Part II would also have four sections. Section 1 would deal with the mining of minerals from the deep seabed beyond the limits of national jurisdiction. It would contain the Statute for the International Seabed authority, based on the work of the First Committee. Section 2 would deal with the institutional requirements of the international management of fisheries. A Statute for an international fisheries management system ought to be prepared and proposed by the Committee on Fisheries of FAO. Such a Statute should eventually be inserted in this place. We are, in this Section, including some background material and suggestions. Section 3 would deal with the institutional

requirements of international navigation. This is the responsibility of IMCO. IMCO is presently engaged in a process of enlarging its membership and the scope of its operations. The new Charter of IMCO should, eventually, be inserted in this Section. We are including some background material and suggestions. Section 4, finally, would deal with the international institutions required for the conservation of the marine environment, scientific research, and the transfer of technology. Some of the institutional arrangements proposed in Part III of the Single Negotiating Text will, if realized, transform the system of international scientific cooperation. In this Section, we are analyzing the required changes and making some suggestions for a coherent institutional system. The creation of such a system would be the responsibility of IOC.

We have added an Annex to Parts I and II, with some comments on the relations between the Informal Single Negotiating Text and the New International Economic Order. This Annex contains a number of suggestions which eventually might be absorbed by the various parts of the final comprehensive Convention.

Part III would deal with the interaction of uses and the integrative machinery required to harmonize such uses, maximizing the benefits therefrom and minimizing the harmful side effects on the socio-economic and natural environment. This part consists of three sections: Section 1 describes the present U.N. structures dealing with international ocean affairs. Section 2 reproduces the Declaration of Oaxtepec which outlines a "new strategy" to advance the goal of a new international order in the oceans at the Conference on the Law of the Sea. Section 3, finally, proposes a new model for the integration of the activities of institutions dealing with ocean affairs.

Part IV would deal with dispute settlement. This would be based on Part IV of the Informal Single Negotiating Text. It would deal with conciliation, arbitration and special procedures, and contain the Statute of the Law of the Sea Tribunal.

We have added an appendix summarizing some basic data on marine resources and the economic potential of the ocean.

PART I

Section I

THE LIMITS OF NATIONAL JURISDICTION IN OCEAN SPACE

1. Baselines

The first issue which arises when considering problems related to national sovereignty or jurisdiction in the oceans is that of the line from which it is measured.

According to the 1958 Convention on the Territorial Sea, the normal baseline is the low-water line along the coast as marked on large scale charts officially recognized by the coastal State. Straight baselines joining "appropriate points" may be drawn where the coastline is deeply indented or if there is a fringe of islands in the immediate vicinity of the coast provided that straight baselines must not depart to any appreciable extent from the general direction of the coast and must not be drawn to or from low-tide elevations unless installations permanently above sea level have been built on them.

Where a system of straight baselines is applicable, "account may be taken, in determining particular baselines, of the economic interests peculiar to the region concerned the reality and importance of which are clearly evidenced by long usage."[1]

The Single Negotiating Text accepts in general the rules on baselines contained in the 1958 Geneva Convention on the Territorial Sea,[2] but proposes further major departures from the general principle that the normal baseline should be the low-water line along the coast and relaxes the already highly flexible rules with regard to criteria for drawing straight baselines. Thus it is now proposed (a) to legitimize the practice of drawing mixed baselines to suit different conditions, (b) to permit the drawing of straight baselines to low-tide elevations when no installations permanently above sea-level have been built on them "in instances where the drawing of baselines to and from such elevations has received general international recognition," and (c) to permit "where because of the presence of a delta or other natural conditions the coastline is highly unstable," the selection of appropriate points "along the farthest seaward extent of the low water

line" and the maintenance of such baselines until changed by the coastal State "notwithstanding the subsequent regression of the low-water line.[3]

In addition, the Single Negotiating Text proposes that an archipelagic State [4] "may draw straight baselines joining the outermost points of the outermost islands and drying reefs of the archipelago provided that such baselines enclose the main islands and an area in which the ratio of the area of water to the area of land, including atolls, is between one-to-one and nine-to-one." The length of these baselines must not exceed 80 nautical miles "except that up to ... per cent of the total number of baselines enclosing any archipelago may exceed that length, up to a maximum of 125 nautical miles."[5] The Single Negotiating Text states that for the purpose of computing the ratio of water to land, "land areas may include waters lying within fringing reefs of islands and atolls, including that part of a steep-sided oceanic plateau which is enclosed or nearly enclosed by a chain of limestone islands and drying reefs lying on the perimeter of the plateau."[6]

Comments and suggestions

There can be no clear limits to national sovereignty or jurisdiction in ocean space unless the line from which such limits are measured is precisely defined and is not, normally, subject to change, particularly unilateral change.

The criteria for drawing straight baselines contained in the 1958 Territorial Sea Convention are far from precise. First, crucial terms are not defined: it is difficult in practice to give a precise and strict interpretation to expressions such as "deeply indented," "immediate vicinity," "general direction of the coast," etc., and these expressions tend to be interpreted rather loosely in the practice of States. Secondly, the 1958 Territorial Sea Convention does not specially state that straight baselines must join *land points* but only *appropriate points*; this ambiguity permits the establishment of straight baselines by geographical coordinates *joining points in the sea* at considerable distances from the coast. Thirdly, there is no limit to the *length* of straight baselines which may be drawn by the coastal State. This permits the enclosure of vast sea areas by joining distant points. Fourthly, a coastal State *at any time* and with virtually unfettered freedom (within the loose criteria prescribed by the 1958 Territorial Sea Convention) may modify previously established baselines, or draw them further out to sea subject only to the obligation of giving "due publicity" to these actions.

In recent years, coastal States have taken increasing advantage of the flexible provisions of the 1958 Territorial Sea Convention with regard to baselines by enclosing hundreds of thousands of square miles of previously high seas and this process of enclosure is accelerating. One or two States have even begun to draw straight baselines by geographical coordinates situated far from land.

In these circumstances it would seem desirable to define more strictly the criteria for drawing straight baselines in order to avoid continued unilateral expansion of coastal State sovereignty in ocean space.

The Single Negotiating Text, however, has preferred further to relax international rules with respect to baselines and to propose the international recognition of special rules in respect of archipelagic States. This approach permits continued relatively unhampered expansion of coastal State sovereignty in the seas.

It is suggested that the Single Negotiating Text be amended to make clear that straight baselines may connect only appropriate points on land. Secondly, it is suggested that straight baselines drawn by coastal States not exceed a length equal to from twice to four times the breadth of the territorial sea. Thirdly, it is believed that explicit provision should be made enabling any State and an appropriate international organization (perhaps the future "integrative machinery" proposed in this study) to challenge before an international Tribunal baselines drawn by a coastal State when these do not appear to conform to the rules set forth in the Convention. Fourthly, it would appear desirable to delete the new special provisions concerning deltas. Finally, if it proves necessary to retain the special rules concerning baselines drawn by archipelagic States, these rules should be considerably tightened by reducing the ratio of water to land to not more than three to one and by setting a flat limit to the length of the straight baselines which may be drawn.

2. "Historic" bays and "historic" waters

"Historic" bays are mentioned incidentally both in the 1958 Geneva Convention on the Territorial Sea and in Part II of the Single Negotiating Text.[7] In neither document is an effort made to define the concept.

There exist claims to certain marine areas as "historic" waters. These are not mentioned in the 1958 Territorial Sea convention or in the Single Negotiating Text.

Comments and suggestions

"Historic" bays and "historic" waters are ill defined, traditional concepts with a troublesome dispute potential. The concepts are unnecessary in the context of the vast expansion of coastal State jurisdiction proposed in the Single Negotiating Text, and should be gradually eliminated from the law of the sea.

It is suggested that the Single Negotiating Text be amended to the effect that (a) all present claims to historic bays and historic waters be registered with the Secretary-General of the "integrative machinery" (or with the secretary general of the International Seabed Authority) within two years of the coming into force of the proposed convention, (b) any State may contest such claims before an international Tribunal, the decision of which is binding, (c) no claim to historic bays or historic waters will be internationally recognized if it has not been registered within two years of the coming into force of the proposed convention.

3. Territorial sea

The territorial sea lies seaward of, and adjacent to, the baselines drawn by the coastal State.

Until comparatively recently the great majority of the international community recognized a territorial sea of three miles. The breadth of the territorial Sea, however, was not defined directly in the 1958 Convention on the Territorial Sea, where it is stated only that "the contiguous zone (the zone contiguous to the territorial sea where the coastal State may exercise certain specific powers) may not extend beyond 12 miles from the baseline from which the breadth of the territorial sea is measured."[8] Over the past fifteen years an increasing number of coastal States have come to favor a limit of 12 nautical miles for the territorial sea and the Single Negotiating Text reflects this increasingly popular view.[9]

Comments and suggestions

No comment is made since it would seem unrealistic to fail to recognize the overwhelming trend towards a wider territorial sea. The usefulness of the concept of territorial sea in the context of a new legal order in ocean space will, however, be commented upon later.[10]

4. Contiguous zone

The contiguous zone is "a zone of the high seas contiguous to its territorial sea" in which "the coastal State may exercise the control necessary to (a) prevent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea, and (b) punish infringement of the above regulations committed within its territory or territorial sea."[11]

The 1958 Territorial Sea Convention set a maximum limit of 12 miles for the contiguous zone.

The territorial sea proposed by the Single Negotiating Text more than absorbs the contiguous zone as defined by the 1958 Territorial Sea Convention.[12] Several States at the Law of the Sea Conference, however, did not wish to see the contiguous zone disappear; the breadth of the contiguous zone was accordingly more than doubled from 12 miles to "24 nautical miles from the baseline from which the breadth of the territorial sea is measured."[13]

Comments and suggestions

The contiguous zone has been retained to accommodate those States arguing in favor of traditional coastal State control in customs, fiscal, immigration and sanitary matters extending somewhat beyond the territorial sea. The need for such control is difficult to justify in view of the fact that (a) the territorial sea proposed by the Single Negotiating Text now includes the entire contiguous zone as defined by the 1958 Geneva Convention on the Territorial Sea, (b) it is proposed to establish an exclusive economic zone where the coastal State may exercise exclusive jurisdiction with regard to artificial islands and installations and where it may arrest vessels to ensure compliance with the laws and regulations enacted by it with respect to living resources of the sea, and (c) it is proposed to extend beyond the territorial sea the control of the coastal State over a number vessel activities.[14]

A zone contiguous to the territorial sea with the characteristics mentioned in Article 24 of the 1958 Territorial Sea Convention is a needless complication in the context of the proposals contained in the single Negotiating Text; it is accordingly suggested that Article 33, Part II of the Single Negotiating Text be deleted.

5. Exclusive economic zone

According to present law of the sea, the coastal State, in principle, exercises no jurisdiction beyond the contiguous zone apart from sovereign rights over the natural resources of the continental shelf. Over the last couple of decades, however, an increasing number of States have claimed sovereign rights over resources and jurisdiction for a number of purposes in marine areas far beyond the territorial sea (often up to 200 miles from the coast). The Single Negotiating Text offers international recognition to this trend by proposing the establishment of an exclusive economic zone extending to a maximum distance of 200 nautical miles, not from the coast but "from the baseline from which the breadth of the territorial sea is measured.

Comments and suggestions

The exclusive economic zone concept is undoubtedly intended to recognize the expansion of coastal State interests in the

marine environment and to balance the expanding interests of the coastal State with the interests of other States. Under contemporary circumstances, a considerable extension of coastal State functional jurisdiction in the marine environment may not be unreasonable.

6. Continental shelf

The concept of a legal continental shelf over which the coastal State exercises sovereign rights for the purpose of exploration and exploitation was launched by the Truman Proclamation in 1945 and officially introduced into the law of the sea by the 1958 Geneva Convention on the Continental Shelf.

The legal continental shelf was defined as (a) "the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas, and (b) the seabed and subsoil of similar submarine areas adjacent to the coast of islands."[16]

The definition has given rise to controversy and, with the progress of technology, could be interpreted as giving coastal States sovereign rights over seabed resources at unlimited distances from the coast. Over the past fifteen years States have interpreted the definition in an increasingly expansive fashion as mineral resources are discovered and become exploitable at increasing distances from the coast.

The Single Negotiating Text redefines the legal continental shelf as "the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance."[17] In short, it is proposed to replace the present criteria of adjacency to the coast, depth (200 meters) and exploitability by the criteria of a minimum distance (200 nautical miles) from straight baselines and of the continental shelf as comprising the entire "natural prolongation" of the land mass up to the outer edge of the continental margin. The Single Negotiating Text leaves it to be inferred that the coastal State will itself decide where the outer edge of its continental margin lies: this circumstance is of some importance since it enables the coastal State to exercise considerable discretion in determining the limits of its legal continental shelf.[18] The Single Negotiating Text also leaves the coastal State free to re-determine as often as it wishes the limits of its legal continental shelf.

Comments and Suggestions

The concept of the legal continental shelf, as developed in the Single Negotiating Text,[19] preserves only the most tenuous relationship with that of the geological shelf and is clearly political in nature. It is based on the dubious assumption that coastal States have acquired under the 1958 Geneva Convention on the Continental Shelf sovereign rights over the entire "natural prolongation" of their land territory up to the outer edge of the continental margin.[20] Furthermore the Single Negotiating Text proposes inconsistent criteria for the determination of the legal continental shelf; a political criterion (distance from the coast) and a geological criterion (the outer edge of the continental margin) which is difficult to determine with any precision with present technology. Thus the limits of coastal State jurisdiction remain highly flexible within wide limits.

Adoption of the proposal contained in the Single Negotiating Text frustrates any attempt precisely to define the limits of national jurisdiction in ocean space, benefits only a few States and has very considerable conflict potential.[21]

With the establishment of a wide economic zone in which the coastal State enjoys exclusive rights to resources and exercises comprehensive powers, the continental shelf concept has lost its "raison d'etre." It should consequently be absorbed by that of the exclusive economic zone. It is accordingly proposed that the entire section on the continental shelf contained in the Single Negotiating Text be deleted and replaced by a provision providing appropriate payment by the international community through the proposed International Seabed Authority to coastal States in those few cases where submarine areas less than 200 meters deep extend beyond 200 miles from the coast. This would compensate the coastal States concerned for the loss of their legitimate expectations under the 1958 Continental Shelf Convention.[22]

7. Islands

Present international law recognizes that islands, defined as "naturally formed areas of land, surrounded by water, which are above water at high tide"[23] may have a territorial sea and a continental shelf. The Single Negotiating Text maintains the present definition of islands and expressly recognizes that they have a territorial sea, a contiguous zone, an exclusive economic zone and a continental shelf determined in accordance with the provisions applicable to other land territory. Rocks which "cannot sustain human habitation or economic life" are, however, recognized only a territorial sea and a contiguous zone.[24]

Comments and Suggestions

It is noted that even minute areas of land with few or no inhabitants, would be comprised within the definition of islands accepted by the Single Negotiating Text and that the expression "rocks which cannot sustain human habitation or economic life" is far from clear.[25] It is also observed that the negotiating text proposal extending to islands, whatever their size, the vast extensions of jurisdiction envisaged for other land territory have highly inequitable implications,[26] high conflict potential[27] and lead to the unnecessary enclosure of several millions of square miles of ocean space.

The question of the extent of the maritime jurisdiction which should be attributed to islands is undoubtedly highly complex and cannot be resolved with absolute fairness to all the national and international interests involved;[28] nevertheless it is possible to make proposals that are more constructive than those contained in the Single Negotiating Text.

It is suggested that areas of land surrounded by water which are above water at high tide be divided for the purposes of the law of the sea, into three categories based on the size of these areas.[29] The categories suggested are: (a) areas less than one square kilometre in area; (b) areas between one and ten square kilometres in area; (c) areas more than ten square kilometres in area. Areas in category (a) could be points on baselines if in sufficient proximity to a sufficiently large land territory but would not generate any maritime jurisdiction whatsoever unless special circumstances were conclusively demonstrated. Areas in category (b) would be called islets; they would possess a territorial sea only. Islands would be areas of land surrounded by water more than ten square kilometres in area; they would possess a territorial sea and an exclusive economic zone.[30] If this suggestion were adopted some of the unfortunate implications of the proposal on islands contained in the Single Negotiating Text could be mitigated.

8. Delimitation of areas under national sovereignty or jurisdiction between States lying adjacent or opposite to each other

Territorial sea. -- The 1958 Geneva Convention on the Territorial Sea provides that, subject to historic title or other special circumstances, "where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial sea of each of the two States is measured."[31] This text is reproduced verbatim in the Single

Negotiating Text.[32]

Contiguous zone. -- In the 1958 Geneva Convention on the Territorial Sea the provision for delimitation of the contiguous zone between two States are identical to those for the delimitation of the territorial sea, with omission, however, of the reference to historic title or other special circumstances. The Single Negotiating Text lacks a delimitation provision.

Exclusive economic zone. -- No exclusive economic zone was discussed at the 1958 Geneva Conference on the Law of the Sea. The Single Negotiating Text proposes that delimitation between adjacent or opposite States "be effected by agreement in accordance with equitable principles, employing, where appropriate, the median or equidistance line and taking account of all the relevant circumstances". "If no agreement can be reached within a reasonable period of time the States concerned shall" resort to the dispute settlement procedures provided in Part IV. "Pending agreement, no State is entitled to extend its exclusive economic zone beyond the median line or equidistance line."[33]

Continental shelf. -- The 1958 Geneva Convention on the Continental Shelf prescribes that "where the same continental shelf is adjacent to the territories of two or more States, whose coasts are opposite each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between them. In the absence of agreement and unless another boundary is justified by special circumstances, the boundary line is the median line, every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured."[34] There is substantially identical provision for adjacent States.

The delimitation provision in the Single Negotiating Text, on the other hand, is identical to that proposed for the exclusive economic zone.[35] In short, the 1958 Geneva Conventions adopt an equidistance/special circumstance rule, modifiable by negotiation, in the case of the territorial sea; an equidistance rule, modifiable by negotiation, in the case of the contiguous zone, and an agreement/special circumstance[36] rule in the case of the continental shelf. The Single Negotiating Text has proposed no change in the Geneva rules with regard to the territorial sea, has not believed it necessary to propose any delimitation rules for the contiguous zone and has proposed an excessively vague rule -- agreement between the States concerned in accordance with undefined "equitable principles" -- for the delimitation of the continental shelf and of the exclusive economic zone between States lying adjacent of opposite each other. The Single Negotiating Text, however, contains an interesting and potentially significant innovation,[37] which stresses international community interest in conflict avoidance, by proposing specific dispute settlement procedures for continental shelf and exclusive economic zone delimitation.

Comments and suggestions

General rules relating to the delimitation of areas under national sovereignty or jurisdiction between States lying adjacent or opposite each other are extremely difficult to formulate. Problems could perhaps be somewhat simplified were the conference on the law of the sea to reduce the number of areas under national sovereignty or jurisdiction to two (territorial sea, and exclusive economic zone) and to delete all reference to the use of straight baselines in the process of delimitation.[38] If this were done, it might be possible to propose a general rule to the effect that where the coasts of two States are opposite or adjacent to each other neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea (and/or exclusive economic zone) beyond the median line every point of which is equidistant from the nearest points on the coast,[39] subject to compulsory dispute settlement procedures in the event that a claim of special circumstances is made.

9. Publicity

The 1958 Geneva Convention on the Territorial Sea and on the Continental Shelf contain vague rules with regard to the action which coastal States must take to bring their decisions on jurisdictional limits to the attention of the international community.

These rules may be summarized as follows: a) straight baselines must be clearly indicated on charts to which "due publicity" must be given;[40] b) no rules are prescribed for the territorial sea, but the line of delimitation between the territorial seas of two States lying opposite or adjacent to each other must be marked on large scale charts officially recognized by the coastal States[41]; c) no rules are prescribed for the contiguous zone; d) no rules are prescribed for the continental shelf, but when the boundaries of the continental shelf of two States lying opposite or adjacent to each other are delimited, this should be done "with reference to charts and geographical features as they exist at a particular date and reference should be made to fixed permanent identifiable points on the land".[42] Similar provisions are contained in the Single Negotiating Text[43] which, however, is a little more specific with regard to the publicity required for straight baselines used for measuring the breadth of the territorial sea.

It is proposed in this connection that the coastal State "must clearly indicate straight baselines on charts, supplemented by a list of geographical coordinates of points, deposited with the Secretary General of the United Nations, who shall give due publicity thereto".

A similar formulation is proposed for baselines drawn by archipelagic States.[44] While the Single Negotiating Text does not propose that the coastal State assume any obligation to bring its actions with regard to the limits of its maritime jurisdiction to the attention of the international community, there is indication that some publicity is expected. Thus Article 2 of Part I states that "States Parties to the Convention shall notify the International Seabed Authority ..... of the limits referred to in paragraph one (seabed area beyond national jurisdiction) ..... determined by coordinates of longitude and latitude and shall indicate the same on appropriate large scale charts officially recognized by that State".

Comments and suggestions

A serious effort should be made to improve the provisions in the Single Negotiating Next dealing with the obligation of coastal States to inform the international community of the limits of marine areas claimed to be under coastal State sovereignty or jurisdiction. It is noted in this connection that a) the number of States using the seas has greatly increased and that many of these States have comparatively limited means of information; b) the number of jurisdictional regimes in ocean space has increased; c) the extent of the marine areas subject to some form of coastal State control has expanded enormously; d) activities in the oceans have multiplied; e) the number of changes made by coastal States in the limits of their national jurisdictional areas is increasing.
It can no longer be assumed that persons using ocean space will necessarily be informed of the precise jurisdictional regime applicable to the marine area which they are transiting or in which they are operating.

Footnotes

1. 1958 Geneva Convention on the Territorial Sea and Contiguous Zone, Articles 3-5. Article 11 of the Convention gives a definition of low-tide elevation and also states that "where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the mainland or an island, the low-water line on that elevation may be used as the baseline for measuring the breadth of the territorial sea."

2. Article 3 of the 1958 Geneva Convention on the Territorial Sea is reproduced verbatim in Article 4, Part II of the Single Negotiating Text. Article 4 (1) of the Geneva Convention is reproduced verbatim in the first part of Article 6, Part II of the Single Negotiating Text. Articles 4 (2), 4 (5), 5 and 11 of the 1958 Geneva Convention are also reproduced verbatim.

3. See U.N. document A/CONF 62/WP 8/ Part II, Articles 4-6 and 12. Article 5 contains a useful provision on the baselines of islands having fringing reefs, not contained in the 1958 Geneva Convention on the Territorial Sea.

4. An archipelagic State is defined as "a State constituted wholly by one or more archipelagos and may include other islands." Document A/CONF 62/WP 8/ Part II, Article 117 (2) (a).

5. U.N. document A/CONF 62/ WP 8/ Part II, Article 118 (1) (2).

6. *Ibid.*, Article 118 (8).

7. 1958 Geneva Convention on the Territorial Sea, Article 7 (6) and U.N. document A/AC 62/ WP 8/ Part II, Article 9 (6).

8. 1958 Geneva Convention on the Territorial Sea, Article 24 (2).

9. U.N. document A/CONF 62/ WP 8/ Part II, Article 2: "Every State shall have the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines drawn in accordance with the provisions of the present Convention." The baseline provisions of the Convention are highly flexible, thus it is unlikely that territorial sea limits will, in most cases, be established at 12 nautical miles from the coast.

10. See page 32 ff.

11. 1958 Geneva Convention on Territorial Sea, Article 24 (1).

12. The breadth of the territorial sea proposed by the Single Negotiating Text is *12 nautical miles* from baselines;

the breadth of the contiguous zone under the 1958 Territorial Sea Convention is *12 miles* from appropriate baselines.

13. U.N. document A/CONF 62/ WP 8/ Part II, Article 33.

14. See for instance: U.N. document A/CONF 62/WP 8/ Part II, Articles 47 (4) and 95; U.N. document A/CONF 62/ WP 8/ Part III, (Protection of the marine environment) Article 25; (Scientific research), Chapter 3, etc.

15. U.N. document A/CONF 62/ WP 8/ Part II, Article 45 (2).

16. 1958 Convention on the Continental Shelf, Article 1.

17. U.N. document A/CONF 62/ WP 8/ Part II, Article 62.

18. It is usually difficult even for the most technologically advanced coastal States to determine with any precision where the outer edge of their continental margin lies. There has been some discussion at the Law of the Sea Conference of a possible review by an international commission of a determination by the coastal State of the outer limits of its continental margin. The commission would certify the result to the coastal State and to the International Seabed Authority. The proposal is not included in the Single Negotiating Text and, even if adopted, would appear to be of limited significance since the proposed commission would probably have to rely on data and information supplied by the coastal State.

19. The reference is to U.N. document A/CONF 62/ WP 8/ Part II, Articles 62-72.

20. The assumption is dubious scientifically and legally. Scientifically, because while an appropriately defined continental shelf may constitute the geological submerged prolongation of a *land mass*, it cannot constitute the prolongation of a *State*. Natural features, such as the Eastern European plain which extends from the Elbe to the Urals, cannot be considered the prolongation of any one State. The assumption is dubious legally because (a) until about ten years ago it was generally accepted that, in principle, the limits of the legal continental shelf could not extend beyond water depths of 200 meters: only in very recent years have States begun to assert claims of sovereign rights over seabed resources to the outer edge of the continental margin, partly for political and economic reasons (hydrocarbons situated on the continental slope and rise are becoming exploitable) and partly at the urging of petroleum companies and their legal advisers; (b) there is no mention of the concept of "natural prolongation" in the 1958 Geneva Convention on the Continental Shelf. The concept is often mentioned in legal literature and has been endorsed by the International Court of Justice in the 1969 North Sea case. The Court, however, has never stated that the "natural prolongation" of a land territory extends to the outer edge of the continental margin, even if it is situated many hundreds of miles

from the coast; (c) the concept of natural prolongation cannot logically be applied to all coastal States. Atolls, for instance (such as the Kingdom of Tonga), can have no natural prolongation of their land territory since *the land area of an atoll is itself the "natural prolongation" of a submerged submarine feature.*

21. For instance, it may be anticipated that with the development of seabed resources, the coastal State would tend to assert jurisdiction over the waters above the continental shelf, thus in practice extending its economic zone. Also, when the continental shelf extends beyond 200 nautical miles, there could be cases of the "continental shelf" of one State extending into the economic zone of another State.

22. Subject to the essential purpose of establishing a clear limit of 200 nautical miles measured from precisely defined baselines to national jurisdiction in ocean space, the suggestion in the text could be usefully supplemented by additional provisions intended to safeguard coastal State interests, such as guaranteed participation on special terms by the coastal State in the development of seabed resources in a defined area beyond its exclusive economic zone, etc.

23. 1958 Geneva Convention on the Territorial Sea, Article 10.

24. U.N. document A/CONF 62/WP 8/ Part II, Article 132.

25. The expression is imprecise and could be virtually meaningless: almost any rock can be made habitable; structures can be built on rocks etc.; it is also not clear why only rocks are mentioned and not permanent sandbanks (such as Aves in the Caribbean).

26. For instance, a small island like Amsterdam (in the Indian Ocean) which has no inhabitants, but can be inhabited, would acquire an ocean space area greater than that which can be acquired by the Federal Republic of Germany, Belgium and the Netherlands.

27. The high conflict potential derives both from the inherent inequity of the proposal and from the fact that small islands belonging to (or part of) one State are not infrequently situated in the vicinity of another State; considerable inequity (and inevitable disputes) result if equal weight is given to the island and to the non-island State in determining the limits of the respective national jurisdictions.

28. Short of a case by case solution which would leave the law of the sea in an uncertain state for a considerable time.

29. The criterion of size is chosen, first because it is relatively constant and easily ascertainable; secondly because it indirectly determines potential to sustain permanent human population, its size, and economic life based on local resources.

30. It is recalled that this paper proposes that the concepts of a contiguous zone and of a legal continental shelf be abolished.

31. 1958 Geneva Convention on the Territorial Sea, Article 12 (1).

32. U.N. document A/CONF 62/WP 8/ Part II, Article 13.

33. U.N. document A/CONF 62/WP 8/ Part II, Article 61.

34. 1958 Geneva Convention on the Continental Shelf, Article 6 (1) (2).

35. U.N. document A/CONF 62/WP 8/ Part II, Article 70.

36. If however there is no agreement, and there is no claim of special circumstances, the median line becomes the boundary.

37. "Potentially significant" since it is difficult to know at this stage whether many States will avail themselves of their right, when ratifying the proposed convention, to declare that they do not accept the compulsory dispute settlement procedures specified in the Convention in respect of disputes concerning sea boundary delimitations between adjacent States. See U.N. document A/CONF 62/WP 9/ Article 18 (2) (6).

38. It is recalled that straight baselines are established and may be changed within broad limits at the discretion of the coastal State.

39. It is not intended, of course, to abolish the use of straight baselines (drawn in accordance with strict criteria) for measuring the breadth of national jurisdictional areas when two States are not lying opposite each other.

40. 1958 Geneva Convention on the Territorial Sea, Article 4 (6). The same rule applies to roadsteads.

41. *Ibidem*, Article 12 (2). An identical rule is prescribed in the event of a coastal State adopting, under the 1958 Geneva Convention on Fishing, unilateral fishing conservation measures when coasts of different States are involved.

42. 1958 Geneva Convention on the Continental Shelf, Article 6 (3).

43. The single negotiating text adopts for the exclusive economic zone the same provisions as are contained in Article 6 (3) of the 1958 Geneva Convention on the Continental Shelf. There could be some doubt whether it is useful, or even possible, to delimit the boundaries of areas such as the exclusive economic zone, situated at more than 200 nautical miles from the coast with reference to fixed points on the land.

44. U.N. document A/CONF 62/WP 8/Part II, Article 6 (7) and Article 118 (6).

Section II

RIGHTS AND DUTIES OF STATES IN MARINE AREAS UNDER NATIONAL SOVEREIGNTY OR JURISDICTION (NATIONAL OCEAN SPACE)

Baselines

Traditionally, waters, including airspace, seabed and its subsoil, on the landward side of baselines used for measuring the breadth of the territorial sea are considered internal waters over which the coastal State exercises as full a sovereignty as over its land territory.[1]

The Single Negotiating Text maintains the sovereignty of the coastal State over waters, including airspace, seabed and its subsoil, on the landward side of baselines, but proposes that, in the case of straight baselines joining the outermost points of the outermost islands and drying reefs belonging to the archipelagic State, sovereignty be exercised subject to the provisions of the future convention. Among these provisions are the following: (a) "if the drawing of...straight baselines encloses a part of the sea which has traditionally been used by an immediately adjacent neighboring State for direct access and all forms of communication...between two or more parts of the territory of such State, the archipelagic State shall continue to recognize and guarantee such rights of direct access and communication;"[2] (b) "archipelagic States shall respect existing agreements with other States and shall recognize traditional fishing rights of the immediately adjacent neighboring States in certain areas of the archipelagic waters;"[3] (c) "ships of all States, whether coastal or not, shall enjoy the right of innocent passage through archipelagic waters,"[4] subject to (i) the right of the archipelagic State, "without discrimination in form or in fact amongst foreign ships, (to) suspend temporarily in specified areas...the innocent passage of foreign ships if such suspension is essential for the protection of its security,"[5] (ii) the right of an archipelagic State to "designate sealanes and air routes suitable for the safe, continuous and expeditious passage of foreign ships and aircraft through its archipelagic waters."[6] These air and sea routes shall traverse the archipelago and adjacent territorial sea and shall include all normal passage routes used as routes for international navigation or overflight through the archipelago...."[7]

Passage through the sealanes may not be suspended by the archipelagic State.[8]

It is evident that the Single Negotiating Text attempts to accommodate the desire of relatively few archipelagic States[9] which wish to enclose the waters of their archipelagoes with the acquired rights of neighboring States and with the international community interest in shielding peaceful navigation from interference by the coastal State.

The interests including security interests of archipelagic States in the waters, which connect and separate the different islands of which they are constituted are obvious. It would be dangerous, however, to recognize the principle that the archipelagic State has *sovereignty* over those waters. The legitimate interests of the archipelagic State can be equally secured and with far less danger to the balance of the law of the sea by special provisions within the context of the concept of the exclusive economic zone.

The section on archipelagic States in the Single Negotiating Text is followed by a section on "oceanic archipelagoes belonging to continental States" which contains a single article: "the provisions of secion 1 are without prejudice to the status of oceanic archipelagoes forming an integral part of the territory of a continental State."[10] The purpose and meaning of this article are mysterious and it should be deleted.

Territorial sea

According to present international law the sovereignty of the coastal State extends over its territorial sea[11] subject to the obligation not to hamper the innocent passage of foreign ships and to give appropriate publicity to any dangers to navigation of which it has knowledge.[12] Innocent passage is defined as "passage not prejudicial to the peace, good order or security of the coastal State.[13] The coastal State "may prevent passage which is not innocent" and may, "without discrimination among foreign ships, suspend temporarily in specified areas of its territorial sea the innocent passage of foreign ships, if such suspension is essential for the protection of its security." No suspension of innocent passage is permitted[14] however through straits "used for international navigation between one part of the high seas and another part of the high seas or territorial sea of a foreign State."[15] Foreign ships transiting the territorial sea must comply with the laws and regulations enacted by the coastal State, particularly with those relating to transport and communciations,[16] and submarines "are required to navigate on the surface and show their flag."[17]

The 1958 Geneva Convention on the Territorial Sea does not define clearly the term "straits used for international navigation" and leaves open the question whether the coastal State may decide, at its discretion, whether the passage of any specific vessel or class of vessels, is prejudicial to its peace, good order or security.

The Single Negotiating Text retains the existing regime of the territorial sea but develops the rather general provisions contained in the 1958 Geneva Convention in an attempt to establish objective standards of innocent passage, particularly through straits, with the aim of accommodating the concerns expressed by States fronting on straits with the general interest of unhampered international navigation.[18] Many of the changes proposed with regard to navigation in the territorial sea are essentially technical: for instance, changes in the wording of some articles (including the definition of the terms "passage" and "innocent passage".[19] Other changes are of considerable importance, among these is the enumeration of activities which make passage of a vessel prejudicial to the peace, good order and security of the coastal State;[20] recognition of wide coastal State regulatory powers with regard to matters relating to innocent passage:[21] a provision establishing the liability of ships exercising the right of innocent passage for any damage caused to the coastal State in the event that they do not comply with its laws and regulations concerning navigation.[22]

The major differences between the Single Negotiating Text and the 1958 Geneva Convention in the Territorial Sea lie, however, in the rules proposed for passage through straits used for international navigation.

As has been mentioned, the traditional rule is that there can be no suspension of innocent passage through straits used for international navigation between one part of the high seas and another part of the high seas or the territorial sea of a foreign State. It is now proposed to distinguish two regimes of passage: transit passage and innocent passage.

Transit passage is defined as "the exercise in accordance with the provisions of this Part (of the proposed Convention) of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one area of the high seas or an exclusive economic zone and another area of the high seas or an exclusive economic zone."[23] The distinguishing characteristic of transit passage is that it cannot be suspended or hampered.[24] The right of transit passage applies to "straits which are used for international navigation between one area of the high seas or an exclusive economic zone and another area of the high seas or an exclusive economic zone,"[25] except that "if the strait is formed by an island of the strait State, transit passage shall not apply if a high seas route or a route in an exclusive economic zone of similar convenience exists seaward of the island."[26]

The regime of transit passage does not "in other respects affect the status of the waters forming such straits nor the exercise by the strait State of its sovereignty or jurisdiction over such waters...,"[27] nor does the regime affect (a) "any areas of internal waters within a strait, unless they were considered as part of the high seas or territorial sea prior to the drawing of straight baselines" in accordance with the rules contained in the Single Negotiating Text,[28] (b) "The status of the waters beyond the territorial seas of strait States...."[29]

(c) "the legal status of straits in which passage is regulated in whole or in part by long-standing international conventions in force specifically relating to such straits."[30]

The exercise of the right of transit passage is subject to conditions designed to meet the concerns of States fronting on straits; thus ships and aircraft must proceed without delay through the strait;[31] the strait State may designate sealanes "where necessary to promote the safe passage of ships,"[32] and the strait State is recognized wide, but not totally discretionary, powers to regulate transit passage through the strait.[33]

The regime of innocent passage, as modified, in the Single Negotiating Text, is maintained in respect of those straits used for international navigation not covered by the regime of transit passage or joining one area of the high seas or of an exclusive economic zone and the territorial sea of a foreign State.[34]

Although neither transit passage nor innocent passage through straits can be suspended and there are other similarities between the two regimes, there exist also major differences, among these are: (a) less extensive and less specific recognition of coastal State regulatory powers in the case of transit passage,[35] (b) the obligations of vessels and aircraft exercising the right of transit passage are formulated in more general terms than those of vessels exercising the right of innocent passage,[36] (c) there is a greater concern for the establishment and maintenance of aids to navigation in straits subject to the regime of transit passage.[37]

Comments

The Single Negotiating Text enumerates the activities which make passage of a vessel through the territorial sea prejudicial to the peace, good order or security of the coastal State, but does *not* state that the passage of a vessel which does not engage in the activities enumerated is innocent. Thus the element of subjectivity in the concept of innocent passage is not eliminated. At the same time, the *content* of the right of innocent passage is restricted to mere transit by provisions which prescribe "continuous and expeditious" passage[38] and which define any activity not having a direct bearing on passage as prejudicial to the peace, good order or security of the coastal State.[39] The wide regulatory powers recognized to the coastal State with regard to matters relating to innocent passage through the territorial sea are circumscribed by articles designed to ensure that the coastal State will not exercise its extensive powers in a manner that will have the effect of prejudicing the right of innocent passage or of discriminating against ships of any State or that will affect the design, construction, manning or equipment of foreign ships.[40] It remains to be seen how effective these provisions will be in practice.

Although the issue of straits is crucial to the success of the law of the sea conference, the precise meaning of the term "straits used for international navigation" has not been clarified and this could cause disputes in the case of straits which

are not often transited by foreign vessels.

The new regime of transit passage has been made necessary by the extension of the limits of the territorial sea and by the wide powers recognized to the coastal State in connection with the regime of innocent passage.

The general effect of the proposals on the territorial sea and straits contained in the Single Negotiating Text is not only to extend the limits of the territorial sea but also to resolve in favor of coastal State control most of the uncertainties of present law of the sea with long-term consequences that are unpredictable.

Contiguous zone

The Single Negotiating Text proposes no changes in the rights of the coastal State within the contiguous zone as set forth in the Geneva Convention on the Territorial Sea (Article 24).

Exclusive economic zone

The exclusive economic zone is a new concept which conveniently consolidates into an integrated regime a variety of claims to exclusive access to resources and to control of activities in the marine environment advanced by coastal States with increasing frequency in recent years. As formulated in the Single Negotiating Text (Part II, Article 45), in an area beyond and adjacent to its territorial sea not extending beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured, the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether renewable or non-renewable, of the bed and subsoil and the superjacent waters;

(b) exclusive rights and jurisdiction with regard to the establishment and use of artificial islands, installations and structures;

(c) exclusive jurisdiction with regard to:

(i) other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; and (ii) scientific research;

(d) jurisdiction with regard to the preservation of the marine environment, including pollution control and abatement;

(e) other rights and duties provided for in the present convention." [41]

At the same time all States "enjoy in the exclusive economic zone the freedoms of navigation and overflight and of the laying of submarine cables and pipelines and other internationally lawful uses of the sea related to navigation and communication," insofar as they are not incompatible with the provisions of the proposed convention with regard to the exclusive economic zone.[42]

Where the proposed convention does not attribute rights or jurisdiction within the exclusive economic zone, conflicts between the interests of the coastal State and of other States are to be resolved "on the basis of equity and in the light of all relevant circumstances taking into account the respective importance of the interests involved to the parties as well as to the international community as a whole.[43]

The Single Negotiating Text contains detailed provisions which are intended to clarify the rights and duties of coastal States and other States within the exclusive economic zone with respect to (a) artificial islands, installations and structures; (b) scientific research; (c) living resources; and (d) protection of the marine environment.

The rules proposed with respect to artificial islands and other installations have been largely derived from the rules contained in the 1958 Convention on the Continental Shelf (Article 5). Apart from a few technical differences,[44] there are, however, two important differences of substance.

First, the coastal State is now explicitly recognized the exclusive right "to construct and to authorize and regulate the construction, operation and use of "artificial islands and other installations not merely on its continental shelf but also in the entire exclusive economic zone.[45] Secondly the provision of the 1958 Convention on the Continental Shelf (Article 5 (1))to the effect that "the exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea nor result in any interference with fundamental oceanographic or other scientific research...," has been deleted[46] together with the provision (1958 Continental Shelf Convention, Article 5 (7)) obligating the coastal State to undertake in the safety zones around installations all appropriate measures for the protection of the living resources of the sea.

The 1958 Convention of the Continental Shelf, Article 5 (8) had provided that "the consent of the coastal State shall be obtained in respect of any research concerning the continental shelf and undertaken there. Nevertheless the coastal State shall not normally withhold its consent if the request is submitted by a qualified institution with a view to purely scientific research into the physical or biological characteristics of the continental shelf, subject to the proviso that the coastal State shall have the right, if it so desires, to participate or to be

represented in the research and that in any event the results shall be published." Part II of the Single Negotiating Text (Part II, Article 49) reproduces this article, with the omission of the reference to the "physical or biological characteristics of the continental shelf,"[47] and extends its provisions to the entire exclusive economic zone with, however, a highly important modification: the last clause in article 5 (8) of the 1958 Continental Shelf Convention is deleted and replaced by a clause providing that the results of scientific research in the exclusive economic zone "shall be published after consultation with the coastal State concerned."[48]

These provisions, elaborated by the Chairman of Committee II[49] are, in part, contradicted by the detailed articles on scientific research elaborated by the chairman of Committee III. Instead of a statement providing for coastal State consent for any research concerning the economic zone and undertaken there, we find in Part III of the Single Negotiating Text that "marine scientific research...in the economic zone and the continental shelf shall be conducted by States as well as by appropriate international organizations in such a manner that the rights of the coastal State, as provided for in this Convention are respected."[50] The 1958 Continental Shelf Convention had already distinguished for certain purposes between "purely scientific research into the physical or biological characteristics of the continental shelf" and other types of research. Part III of the Single Negotiating Text, as distinguished from Part II of the same Text, now proposes a basic distinction between fundamental research and research related to the exploration and exploitation of the living and non-living resources of the exclusive economic zone.[51]

"States and international organizations"[52] intending to conduct scientific research in the exclusive economic zone must communicate this fact through appropriate official channels to the coastal State concerned[53] indicating whether they consider such research to be of a fundamental nature or related to the resources of the economic zone or continental shelf.[54] The coastal State is required to acknowledge receipt of the communication immediately. If the coastal State considers that "the research project defined by the researching State as fundamental is not of such a nature, it may object only on the ground that the said project would infringe on its rights as defined in this Convention over the natural resources of the economic zone, or continental shelf." Any resulting dispute, if not settled by negotiation, shall be submitted at the request of either party to the dispute settlement procedure established by the Convention.[55] When an affirmative reply is received from the coastal State[56] the project may be undertaken subject to compliance with the conditions enumerated in Article 16 (Part III)[57] and to the obligations mentioned in Article 23 (Part III) of the Single Negotiating Text.[58]

Research related to the living and non-living resources of the exclusive economic zone may be conducted only with the express consent of the coastal State concerned. If permission is granted the entity undertaking the research must provide the

coastal State with a full description of the project, comply with the conditions enumerated in Article 16 (Part III), provide the coastal State as soon as practicable with "a report including a preliminary interpretation" and such other information relating directly to the project as the coastal State may request, but may not publish the results of the research or make such results internationally available "without the express consent of the coastal State."[59]

The articles on scientific research in the economic zone are completed by providing that "liability in respect of damage caused within the area under national jurisdiction and/or sovereignty of a coastal State arising from marine scientific research activities shall be governed *by the law of the coastal State*, taking into account relevant principles of international law."[60]

Creation of the exclusive economic zone replaces freedom of fishing[61] by the sovereign rights of the coastal State over the exploration, exploitation, conservation and management of living resources in a broad area beyond the territorial sea accompanied by broad coastal State enforcement powers.[62] The sovereign rights of the coastal State are limited only by a duty (a) "to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over exploitation;"[63] (b) to "promote the objective of optimum utilization of the living resources in the exclusive economic zone...;"[64] (c) to allow adjoining landlocked States to participate in the exploitation of living resources in their exclusive economic zone on an equitable basis; the terms and conditions of such participation are to be determined by the States concerned through bilateral, sub-regional or regional agreements.[65] The same rights are recognized to developing coastal States which can claim no exclusive economic zone of their own and to developing coastal States "which are situated in a subregion or a region whose geographical peculiarities make such States particularly dependent for the satisfaction of the nutritional needs of their populations upon the exploitation of the living resources in the economic zones of their neighboring States;[66] (d) for coastal States in a region "to seek either directly or through appropriate subregional or regional organizations to agree upon the measures necessary...to ensure the conservation and management" of living resources which occur within the economic zones of two or more States.[67]

The Single Negotiating Text recommends that "where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone, the coastal State and the States fishing for such stocks in the adjacent area shall seek either directly or through appropriate subregional or regional organizations to agree upon the measures necessary for the conservation of these stocks *in the adjacent area*.[68]

As distinguished from the 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, the Single Negotiating Text contains special provisions for highly

migratory species, anadromous and catadromous species, marine mammals and sedentary species.

With regard to highly migratory species, it is proposed that "the coastal State and other States whose nationals fish highly migratory species in the region shall cooperate directly or through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region both within and beyond the exclusive economic zone."[69]

The Single Negotiating Text recognizes that "coastal States in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks."[70] These States shall ensure the conservation of stocks by the establishment of appropriate regulatory measures[71] and may establish total allowable catches after consultation with other States fishing these stocks. Enforcement of the regulations adopted by the coastal State is facilitated by the provision that "fisheries for anadromous stocks shall be conducted only in waters within exclusive economic zones...."[72]

States are more interested in anadramous stocks (salmon) than in catadromous stocks (eels), hence the Single Negotiating Text is content to suggest similar but more general provisions for the latter.[73]

The provision with regard to marine mammals contained in the Single Negotiating Text is general in nature: States are urged to cooperate, directly or through international organizations, in the protection and management of marine mammals, and coastal States and international organizations are expressly authorized to prohibit, regulate and limit the exploitation of marine mammals.[74]

The Single Negotiating Text mentions sedentary species only for the purpose of ensuring that they are not subject to the provisions with regard to fishing in the exclusive economic zone.[75] Thus with regard to these species the coastal State is exempt from the duty to ensure their proper conservation, management and optimum utilization and from the duty to cooperate with other States in their management; the coastal State also need not permit adjoining land-locked countries to participate in their exploitation.

As already noted, the single negotiating text recognizes that in its exclusive economic zone a coastal State has "jurisdiction with regard to the preservation of the marine environment, including pollution control and abatement."[76] The general norm contained in Part II of the Single Negotiating Text is elaborated in Part III, where it is stated that the coastal State "has the exclusive right to permit, regulate and control" dumping of "wastes and other matter" within an, as yet, undetermined distance from its coast[77] and the right to establish and enforce appropriate non-discriminatory laws and regulations for "the protection of the marine environment within its economic zone, where particularly severe climatic conditions create obstructions or exceptional hazards to navigation..."[78] The negotiating text also provides that "where internationally agreed rules and standards are not in existence, or are inadequate, to meet special circumstances and where the coastal State has reasonable grounds for believing that a particular area of the economic zone is an area where for recognized technical reasons in relation to its oceanographical and ecological conditions, its utilization and the particular character of its traffic, the adoption of special mandatory measures for the prevention of pollution from vessels is required, the coastal State may apply to the competent international organization for the area to be recognized a special area"; if recognition is given, the laws and regulations established by the coastal State become applicable in relation to foreign vessels six months after they have been notified to the international organization concerned.[79]

The coastal State is given full authority to enforce its laws and regulations in its exclusive economic zone. In the case of suspected violations of international standards and rules relating to vessel discharges within a yet undetermined distance from the baseline from which the territorial sea is measured, the coastal State may normally only require the vessel to identify itself, to specify its last and next port of call and such other information as will make it possible to establish whether a violation has been committed.[80] If the suspected violation "has been of a flagrant character causing severe damage or threat of damage to the marine environment,"[81] the vessel may be required to stop and submit to boarding and inspection. In either case the coastal State must promptly notify the flag State both of the suspected violation and of the measures taken[82] and must provide "recourse in its courts in respect of loss or damage resulting from the inspection, the enquiry or application of measures taken. . . . where they exceed those which were reasonably necessary in view of existing information."[83]

Comments

The proposal to establish an exclusive economic zone is of fundamental importance since it affects "more interests of more States than any other aspect of the Single Negotiating Text"[84] and the manner in which most resource and non-resource activities in the marine environment are conducted.

As has been noted, the concept takes into account the expansion of coastal State interests in ocean space, deals comprehensiyely with a wide range of activities and attempts to balance coastal State and other interests with regard to different activities. Resource oriented activities, including resource oriented scientific research, are generally subject to the exclusive jurisdiction of the coastal State which normally may be exercised with almost total freedom,[85] while other activities, including non-resource oriented research, may, in principle, be freely conducted[86] subject to traditional rules of international law, the rights and duties of the coastal State[87] and new norms proposed in the Single Negotiating Text, particularly with respect to the marine environment.

The formulations of some of the most important provisions with regard to the exclusive economic zone are marked by an unfortunate vagueness which reflects, and attempts to accommodate, divergencies of views expressed at the law of the sea conference.[88] There are also a number of apparent contradictions between the provisions on the exclusive economic zone contained in Part II of the Single Negotiating Text and corresponding provisions in Part III, which may reflect, in part, lack of coordination between different committees of the conference.[89] It is also unfortunate that there is no provision made in the Single Negotiating Text to reconcile resource oriented uses with non-resource oriented uses on the lines of Article 5 of the 1958 Continental Shelf Convention.

Some articles are unnecessary[90] or unnecessarily discriminatory,[91] others are so detailed and cumbrous that their application is likely to be difficult.[92]

Fishing is dealt with in considerable detail in the Single Negotiating Text, but factors to be taken into account when enacting fishery conservation measures are sometimes mutually exclusive[93] and the obligations imposed on States are unrealistic in the majority of cases;[94] it would probably be useful to re-draft many of the provisions in this connection.

References to cooperation in the exchange of fishery information are constructive, but the provisions concerning international cooperation in the management of fisheries are insufficiently precise and usually are not applicable within the exclusive economic zone, even with respect to species which move between the economic zone and an adjacent area of the high seas.[95] Finally the articles on fisheries retain the concept of maximum sustainable yield; they do not attempt to define the term "conservation of the living resources of the sea" (the term, as such, is not even mentioned: only "conservation measures" are mentioned) which seems inappropriate under contemporary circumstances,[96] and do not attempt to limit *fishing effort*.[97]

Continental Shelf

According to the 1958 Geneva Convention on the Continental Shelf, "the coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources;"[98] these rights are exclusive[99] and "do not depend on occupation effective or notional, or on any express proclamation."[100] Continental shelf exploration and natural resource exploitation "must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea nor result in any interference with fundamental oceanographical or other scientific research carried out with the intention of open publication;"[101] nor, subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, may the coastal State impede the laying of submarine cables or pipelines. There are detailed rules with regard to the construction of installations and the establishment of safety zones around them.[102] Finally, "the rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas or that of the airspace above those waters."[103]

The Single Negotiating Text, while proposing a new definition of the limits of the continental shelf (see *supra* page...) maintains the basic structure of the rights and duties of coastal States as outlined in the 1958 Geneva Convention on the Continental Shelf. Several of the provisions of this Convention have been simply reproduced and in other cases, for instance with regard to offshore installations, provisions of the Convention have been transferred to the section of the Single Negotiating Text dealing with the exclusive economiz zone. Nevertheless there are some significant differences: the Single Negotiating Text proposes that scientific research concerning the contintal shelf and undertaken there be subject to the consent of the coastal State[104]; that the coastal State have the exclusive right to authorize and regulate drilling on the continental shelf for *all* purposes[105]; that the delineation of the course for the laying of pipelines be subject to the consent of the coastal State[106] and that the coastal State "with respect to the artificial islands, installations and structures and seabed activities under its jurisdiction, shall take appropriate measures for the protection of the marine environment from pollution and ensure compliance with appropriate minimum international requirements. . ."[107]

A major innovation in the Single Negotiating Text is the proposal that "the coastal State shall make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured"[108] to an International Authority,[109] at a rate and on terms yet to be agreed, which "will distribute these payments and contributions on the basis of equitable sharing criteria, taking into account the interests and needs of developing countries."[110]

Archipelagic States

Traditionally, waters (including airspace and seabed) on the landward side of straight baselines used for measuring the breadth of the territorial sea are considered internal waters over which the coastal State exercises as full a sovereignty as over its land territory.

The single negotiating text now proposes to distinguish between waters on the landward side of straight baselines drawn by coastal States which are not archipelagic States and waters enclosed by straight baselines drawn by archipelagic States to join the outermost points of the outermost islands of the archipelago. In the former case, the traditional full sovereignty of the coastal State is maintained unaltered. In the second case, the negotiating text suggests the introduction into international law of the new concept of *archipelagic waters*.

Archipelagic waters, their seabed and the airspace above them, regardless of their depth or distance from the coast, are under the sovereignty of the archipelagic State[111] but the exercise of this sovereignty is subject to the restraints enumerated in the negotiating text. Thus the archipelagic State must "recognize traditional fishing rights of immediately adjacent neighboring States in certain areas of archipelagic waters"[112] and a "right of innocent passage through these waters exists for ships of all States."[113] The right of innocent passage is circumscribed and carefully regulated in an attempt equitably to balance the requirements of international navigation and the desire of archipelagic States to obtain control over sea and air navigation. Thus, on the one hand, the archipelagic State is recognized the right to "designate sea lanes and air routes suitable for the safe, continuous and expeditious passage of foreign ships and aircraft," to suspend passage temporarily in specified areas of archipelagic waters, "if such suspension is essential for the protection of its security" and to make laws and regulations, which must be observed by foreign ships, on such matters as the prevention of pollution, safety of navigation, regulation of marine traffic, prevention of fishing, etc. On the other hand, the archipelagic State is required not to hamper "archipelagic sealanes passage" and to give "appropriate" publicity to dangers to navigation or overflight of which it has knowledge within the designated sea lanes; the designated sea lanes must be clearly indicated on charts, must be not less than a yet-to-be-decided width and must include all normal passage routes used for international navigation or overflight, etc."[114]

Comments

The concept of archipelagic waters seeks to accommodate the desire of certain archipelago States to exercise sovereignty over the waters within an archipelagic with the interests of other nations and the common interest of the world community. In fact the only world community interests which the Single Negotiating Text seeks to protect are navigation and overflight.

Innocent passage is provided for in archipelagic waters and an attempt is made to guarantee unhampered passage (archipelagic sea lanes passage) in sea lanes and air routes through the archipelago by carefully balancing the rights and duties of the archipelagic State and the rights and duties of other States. The attempt is not totally successful.

It is unfortunate that scientific research and other activities in archipelagic waters are subject to the consent of the coastal State.

Landlocked States

The 1958 Convention on the High Seas recognized that in order to enjoy the freedom of the seas on equal terms with coastal States, landlocked countries should have free access to the sea. To this end the Convention stated that States situated between the sea and a State having no sea-coast should, by common agreement with the latter, accord: "(a) to the State having no sea-coast, on a basis of reciprocity, free transit through their territory and (b) to ships flying the flag of that State treatment equal to that accorded to their own ships, or to the ships of other States, as regard access to seaports and the use of such ports."[115] All matters relating to freedom of transit and equal treatment in ports were to be settled by mutual agreement, in case the States concerned were not already parties to existing international conventions.

The Single Negotiating Text contains a different terminology and more detailed provisions than the 1958 Convention on the High Seas but does not significantly expand the rights of landlocked countries. The principle of freedom of transit to the sea is maintained but "the terms and conditions" for the exercise of this right must be agreed "through bilateral, subregional or regional agreements" and the States situated between the landlocked country and the sea are recognized "the right to take all measures to ensure that the rights provided . . . for landlocked States, shall in no way infringe their legitimate interests."[116]

Equality of treatment in the ports of the country situated between the landlocked State and the sea, is limited to "treatment equal to that accorded to other foreign ships;"[117] on the other hand the negotiating text contains provisions not found in the 1958 High Seas Convention to the effect that, by agreement between the States concerned, "free zones or other facilities may be provided at the ports of entry and exit in the transit State,"[118] and that "means of transport in transit used by landlocked States shall not be subject to taxes, tariffs or charges higher than those levied for the use of means of transport of the transit State.[119]

Enclosed and semi-enclosed seas[120]

The 1958 Geneva Conventions do not contain special provisions concerning enclosed and semi-enclosed seas. The Single Negotiating Text, on the other hand, reflecting developments actual or under consideration in some areas, proposes an obligation of cooperation either directly or through an appropriate regional organization, between States bordering enclosed or semi-enclosed seas "in their exercise of their rights and duties," particularly with regard to living resources, preservation of the marine environment and scientific research.[121] Cooperation between these States, however, "shall not affect the rights and duties of coastal or other States under other provisions of the present Convention and shall be applied in a manner consistent with those provisions."[122]

Territories under foreign occupation or colonial domination

The single negotiating text proposes that "the rights recognized or established by the present Convention to the resources of a territory . . . under foreign occupation or colonial domination . . . . shall be vested in the inhabitants of that territory to be exercised by them for their own benefit. . ." and in no case may these rights "be exercised, profited or benefited from or in any way infringed by a metropolitan or foreign power administering or occupying such territory. . ."[123]

The article originated from proposals made by the group of 77.[124] The article is not easy to interpret and it will not be easy to implement.

Footnotes

1. Subject to the provision that "where the establishment of a straight baseline has the effect of enclosing as internal waters areas which previously had been considered as part of the territorial sea or of the high seas a right of innocent passage...shall exist in those waters." 1958 Geneva Territorial Sea Convention Article 15 (2).

2. U.N. document A/CONF 62 / WP 8 / Part II, Article 118 (7).

3. *Ibidem*, Article 122.

4. *Ibidem*, Article 123 (1).

5. *Ibidem*, Article 123 (2).

6. *Ibidem*, Article 124 (1)

7. *Ibidem*, Article 124 (4).

8. *Ibidem*, Article 126. The Single Negotiating Text (Article 127-129) carefully regulates in detail the rights and duties of the archipelagic State and of foreign ships and aircraft with respect to transit through archipelagic waters and, in particular through the sealanes designated by the archipelagic State. The emergence of two new legal terms should be noted: (i) "*archipelagic waters*" which has acquired the meaning of waters which are enclosed by straight baselines drawn by an archipelagic State in accordance with the provisions of the future convention and which join the outermost points of the outermost islands and drying reefs of the archipelago constituting such a State; (ii) "*archipelagic sealanes passage*" which has acquired the meaning of the passage of foreign vessels in accordance with the provisions of the future convention through sealanes designated by the archipelagic State.

9. Not all archipelagic States have found it necessary to support the archipelagic concept.

10. *Ibidem*, Article 131. The purpose is mysterious, because it is unclear why the Single Negotiating Text should mention "oceanic archipelagoes forming an integral part of the territory of a continental State" and not non-oceanic archipelagoes forming part of the territory of a continental State or oceanic archipelagoes forming an integral part of the territory of a non-continental State. The meaning is unclear because the Single Negotiating Text does not mention what the present status of oceanic archipelagoes forming an integral part of the territory of a continental State, is.

11. Including the airspace over the territorial sea and its seabed and subsoil.

12. 1958 Geneva Convention on the Territorial Sea, Article 15. The Convention (Articles 18-20) also contains provisions concerning charges which may be levied on a transiting vessel and limiting the exercise by the coastal State of its civil and criminal jurisdiction with respect to vessels passing through its territorial sea.

13. *Ibidem*, Article 14 (4).

14. *Ibidem*, Article 16 (1) (3)

15. *Ibidem*, Article 16 (4)

16. *Ibidem*, Article 17

17. *Ibidem*, Article 14 (6)

18. It is generally recognized that new provisions on the subject of passage through the territorial sea and particularly through straits used for international navigation have become necessary, both because it is proposed to extend the breadth of the territorial sea to 12 nautical miles (thus enclosing many straits within territorial waters) and because the failure appropriately to amend the baseline provisions of the 1958 Geneva Convention on the Territorial Sea makes it possible to draw baselines across important straits (which thus become internal waters).

19. In order to cover the recent development of offshore terminals and harbors, passage has been defined as "navigation through the territorial sea for the purpose of traversing that sea without entering internal waters or *calling at a roadstead or port facility outside internat waters.*" Innocent passage now also specifically includes stopping *"for the purpose of rendering assistance to persons, ships or aircraft in danger or distress."* Article 14 (6) of the 1958 Geneva Convention on the Territorial Sea has been amended (Single Negotiating Text Part II, article 17) by providing that "submarines *and other underwater vehicles* are required to navigate on the surface and show their flag *unless otherwise authorized by the coastal State"* (all italicized words are new), etc.

20. See, for details, U.N. document A/CONF 62/WP 8/ Part II, Article 16 (2).

21. For details, see *ibidem*, Article 18 and 19. See also A/CONF 62/ WP 8/ Part III, Article 20 (3) (4).

22. U.N. document A/CONF 62/ WP 8/ Part II, Article 23. Article 32 establishes the liability of the flag State for any damage caused by a warship or government ship operated for non-commercial purposes, bearing its flag, which results from non-compliance with coastal State laws and regulations relating to passage through the territorial sea.

23. U.N. document A/CONF 62/ WP 8/ Part II, Article 38 (2)

24. *Ibidem*, Article 43.

25. *Ibidem*, Article 37.

26. *Ibidem*, Article 38 (1).

27. *Ibidem*, Article 34.

28. *Ibidem*, Article 35 (a).

29. *Ibidem*, Article 35 (b).

30. *Ibidem*, Article 35 (c).

31. For details, see *ibidem* Article 39.

32. For details, see *ibidem*, Article 40. Article 40 (4) is an interesting example of the attempt to circumscribe the discretion of the coastal State in the interests of navigation and of the balance produced by the law of the sea negotiations: before designating sealanes a strait State "shall refer proposals to the competent international organization with a view to their adoption" (IMCO); at the same time, "the organization may adopt only such sealanes...as may be agreed with the strait State, after which the strait State may designate or prescribe them."

33. For details, see *ibidem*, Article 41.

34. *Ibidem*, Article 44.

35. Compare, for instance, Articles 18 and 19 with Article 40 and 41 of Part II of the Single Negotiating Text.

36. Compare, for instance, Article 16 with Article 39 of Part II of the Single Negotiating Text. In addition, it is important to note that *submarines are not required to surface and to show their flag when exercising the right of transit passage.*

37. See, for instance, single Negotiating Text, Part II Article 42.

38. U.N. document A/CONF 62/ WP 8/ Part II, Article 15 (2).

39. *Ibidem*, Article 16 (2) (1).

40. *Ibidem*, Article 18 (2) and Article 21.

41. The Text is based on the sixth revision of a text prepared by the "Evensen group", an informal group of some 40

representatives chaired by Jens Evensen of Norway. Important differences between this text and the Single Negotiating Text are (a) that this latter text omits the qualifying words "as provided for in this convention" in describing coastal State jurisdiction with respect to preservation of the marine environment and (b) recognizes the *exclusive* jurisdiction (as distinguished from merely jurisdiction) of the coastal State with regard to scientific research, establishment and use of installations and other activities for economic exploration and exploitation with the exclusive economic zone.

42. U.N. document A/CONF 62/ WP 8/ Part II, Article 47 (1) (2).

43. U.N. document A/CONF 62/ WP 8/ Part II, Article 47 (3).

44. For instance; (i) the 1958 Continental Shelf Convention recognized that coastal States may establish 500 meter wide safety zones around installations; these are becoming inadequate for a number of reasons. Accordingly, the Single Negotiating Text (Article 48 (5), while maintaining the rule providing for 500 meter wide safety zones, has added the clause "except as authorized by generally accepted international standards or as recommended by the appropriate international organizations," (ii) artificial islands are mentioned in the Single Negotiating Text; these are not mentioned because they did not then exist, in the Continental Shelf Convention.

45. It is important also to note that the 1958 Continental Shelf Convention merely recognized the right of the coastal State to construct and maintain or operate installations and other devices necessary for the exploration and exploitation of the natural resources of the continental shelf. The convention did not give the coastal State the *exclusive* right to construct installations. Thus installations not directly connected with natural resource exploration and exploitation could be freely constructed by any State on the continental shelf, subject to the provisions of Article 5 (8) of the Continental Shelf Convention. It is now proposed that the coastal State shall have the exclusive right to construct and to authorize and regulate the construction of (a) artificial islands; (b) installations and structures for all economic purposes; (c) installations and structures which *may interfere* with the exercise of the rights of the coastal State in the exclusive economic zone. The broadened powers and wide discretion recognized to the coastal State has important implications, *inter alia*, with regard to military uses of the seabed.

46. The Single Negotiating Text, however, maintains the provision that artificial islands, etc., and the safety zones around them may not be established "where interference may be caused to the use of recognized sealanes essential to international navigation." See 1958 Convention on the Continental Shelf, Article 5 (6) and U.N. Doc. A/CONF 62/WP 8/Part II, Article 48 (7).

47. The practical consequences of this omission are as yet unclear.

48. The suggestion is clear that publication of the results of scientific research is not desired without the approval of the coastal State; in this connection, the Single Negotiating Text, Part II, (Marine Scientific Research) Article 21 (c) is highly relevant.

49. Committee II of the United Nations Conference on the Law of the Sea.

50. U.N. document A/CONF 62/ WP 8/ Part III, (Marine Scientific Research), Article 14.

51. The idea of distinguishing between the two types of research was first proposed by the U.S.S.R. and other socialist countries at the conference. See United Nations document A/Conf 62/ C 3/ L 26.

52. It is not clear why the text mentions only States and international organizations instead of using a general term that would more explicitly permit the conduct of scientific research in the exclusive economic zone by private persons and institutions.

53. The communication to the coastal State must include also all details concerning the scientific project. See U.N. document A/CONF 62/ WP 8/ Part III (Scientific research), Article 15.

54. *Ibidem*, Article 19.

55. *Ibidem*, Article 20.

56. It is not clear whether the sponsoring State or international organization may proceed with the research project if the coastal State does not acknowledge receipt of the communication received or does not express a view with regard to the nature of the project. According to Part II of the Single Negotiating Text the coastal State has exclusive jurisdiction over scientific research in the exclusive economic zone (Article 45) and its consent is required for any research in the zone (Article 49). Part III (Article 22) of the Single Negotiating Text permits the research project to proceed in the absence of a specific reply by the coastal State.

57. It is interesting to note that it is proposed that the coastal State now enjoys far wider rights than those recognized to it under Article 5 of the 1958 Convention on the Continental Shelf. Thus not only is the coastal State now recognized the right to participate or be represented in the research project, but also the right (a) to be provided with the conclusions of the project; (b) to receive the raw and

processed data and samples; (c) to request assistance in assessing the data and samples; (d) to be informed of any major change in the research program. The obligation of publication is made more specific; research results must now be made available "through International Data Centers or through other appropriate channels, as soon as feasible" (Part III Marine Scientific Research, Article 16).

58. Article 23 reads as follows: "States and international organizations conducting scientific research in the economic zone of a coastal State shall take into account the interest and rights of the land-locked and other geographically disadvantaged States of the region, neighboring to the research area...and shall notify these States of the proposed research project as well as provide at their request relevant information and assistance as specified in Article 15 and Article 16 sub-paragraphs ( ) and these States also have the right to participate in the project (e) and (g)" whenever feasible.

59. U.N. document A/CONF 62/ WP 8/ Part III Marine Scientific Research), Article 21.

60. *Ibidem,* Article 35 (3). Discrepancies in terminology between Part II and Part III of the Single Negotiating Text should be noted: for instance, Part III uses the term *"economic zone"* instead of *"exclusive economic zone"* used in Part II: Part III mentions only *"States and international organizations"* as entities which may be authorized to conduct scientific research in the exclusive economic zone, while Part II suggests that scientific research will normally be conducted by *"qualified institutions."* The reason for these, and other, discrepancies is unclear.

61. Tempered, however, by the recognition of the special interest of the coastal State "in the maintenance of the productivity of the living resources in any area of the high seas adjacent to the territorial sea." 1958 Geneva Convention on Fishing, Article 6 (1).

62. These powers include "boarding, inspection, arrest and judicial proceedings as may be necessary to ensure compliance with the laws and regulations enacted" by the coastal State, but coastal State penalties for violations of fisheries regulations in the exclusive economic zone "may not include imprisonment...or any other form of corporal punishment" and "arrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security." U.N. document A/CONF 62/ WP 8/ Part II, Article 60.

63. *Ibidem,* Article 50 (2). Conservation measures must be designed "to maintain or restore harvested species at levels which can produce the maximum sustainable yield" taking into account a variety of factors (*Ibidem,* Article 50 (3) (4)) and provision is made for the regular exchange of scientific

information, catch and fishing effort statistics through sub-regional and global organizations. (*Ibidem* Article 50 (5).

64. In this connection the coastal State has the obligation to determine its capacity to harvest the living resources of the exclusive economic zone. Where it does not have the capacity to harvest the entire allowable catch, it must through agreements, and other arrangements and pursuant to a wide variety of, sometimes burdensome terms, conditions and regulations give other States access to the surplus of the allowable catch (*Ibidem*, Article 51).

65. *Ibidem*, Article 57. Developed land-locked States, however, may exercise their rights only within the exclusive economic zone of neighboring *developed* coastal States.

66. U.N. document A/CONF 62/ WP 8/ Part II, Article 58.

67. *Ibidem*, Article 52 (1).

68. *Ibidem*, Article 52 (2). It should be noted that agreement is recommended *only* with respect to the area *beyond* the exclusive economic zone. *No cooperative management of stocks over their entire range* (within and outside the exclusive economic zone) *is recommended*, presumably because it is not desired to give the impression of weakening the sovereign rights of the coastal State over living resources within the exclusive economic zone.

69. *Ibidem*, Article 53 (2).

70. *Ibidem*, Article 54. Anadromous stocks include salmon.

71. No consultation with other States or with international organizations is required before issuing these regulations.

72. *Ibidem*, Article 54 (3) (a). See Article 54 in its entirety for details of the system proposed for anadromous stocks.

73. U.N. document A/CONF 62/ WP 8/ Part II, Article 55.

74. *Ibidem*, Article 53 (3). It is not clear why it was found necessary expressly to authorize coastal States and international organizations to prohibit, regulate and limit the exploitation of marine mammals: coastal State powers in this regard within areas subject to its jurisdiction are unquestioned as are also the powers of international organizations, such as the International Whaling Commission, within the limits of their agreed functions.

75. *Ibidem*, Article 56.

76. U.N. document A/CONF 62/Wp 8/ Part II, Article 45 (1) (d).

77. U.N. document A/CONF 62/WP 8/ Part III (Protection of the Marine Environment), Article 19 (3).

78. U.N. document A/CONF 62/ WP 8/ Part III, (Protection of the Marine Environment) Article 29 (5).

79. U.N. document A/CONF 62/ WP 8/ Part III (Protection of the Marine Environment) Article 20.

80. *Ibidem*, Article 30.

81. *Ibidem*, Article 31.

82. *Ibidem*, Article 32. If the vessel has been stopped and inspected the coastal State must also inform the consular and diplomatic representative of the flag State of the vessel.

83. U.N. document A/CONF 62/ WP 8/ Part III, Article 37.

84. John R. Stevensen and Bernard H. Oxman: *The Third United Nations Conference on the Law of the Sea: the 1975 Geneva Session*. American Jorunal of International Law, October 1975.

85. Subject to a few general norms prescribed in the proposed convention, and to general norms of international law, the most important of which, perhaps, is, that in exercising its rights the coastal State must have due regard to the rights and interests of other States.

86. This is not, however, entirely clear. Article 47 (1) expressly recognizes the freedom of navigation, overflight and of laying submarine cables and pipelines "and other internationally lawful uses of the sea related to navigation and communication" and by reference (Article 47 (2)) the freedom to construct artificial islands and other installations and the freedom of scientific research. But

(a) Article 48 states that the coastal State has "the exclusive right to construct and to authorize and regulate the construction, operation and use of artificial islands, installations and structures for economic purposes and installations and structures which may interfere with the rights of the coastal State;"

(b) Article 50 states that "the consent of the

coastal State shall be obtained in respect of any research concerning the exclusive economic zone and undertaken there;

(c) The delineation of the course of a pipeline requires the consent of the coastal State;

(d) Navigation is subject to a variety of environmental rules and regulations enacted by the coastal State;

(e) In exercising their rights in the economic zone, States "must comply with the laws and regulations enacted by the Coastal State" with respect to the innumerable matters under coastal State jurisdiction.

87. These are often substantial and are sometimes set out in considerable detail.

88. For instance: Article 47 (3) "Where the present Convention does not attribute rights or jurisdiction... within the exclusive economic zone and a conflict arises between the interests of the coastal State and any other State or States, the conflict should be resolved on the basis of equity and in the light of all relevant circumstances, taking into account the respective importance of the interests involved." In Article 51, the concept of "optimum utilization of the living resources" is not defined.

89. For instance: the provisions of Article 49 (Part II) on scientific research appear to contradict the corresponding provisions of Articles 15-25 (Part III). The provisions of Article 48 (Part II) could be deemed to restrict excessively the provisions of Article 47 (2) (Part II). Article 65 appears to negate, in practice, the freedom to lay submarine pipelines, etc.

90. For instance, Article 51 (4)(a)-(k); if the coastal State has sovereign rights for the purpose of exploring, exploiting, conserving and managing living resources in the exclusive economic zone, it is unnecessary to enumerate the type of fishery regulations which the coastal State may enact.

91. For instance, Article 57: "Developed land-locked States shall, however, be entitled to exercise their rights only within the exclusive economic zones of neighboring developed coastal States." The provision is unnecessary because no developed land-locked States adjoin developing coastal States.

92. See, for instance, all the conditions and procedures with which States must comply when conducting scientific research in the exclusive economic zone (Part III, Scientific Research, Articles 15-23), which include also "the interest and rights of the land-locked and geographically disadvantaged States of the region"; these are different from those of the State controlling the economic zone where the research is to be conducted.

93. For instance, Article 50 (3). The factors enumerated are "relevant environmental and economic factors, including the economic needs of coastal fishing communities ...the special requirements of developing countries...fishing patterns...interdependence of stocks and any generally recommended subregional, regional or global minimum standards."

94. Articles 50 and 51 assume that all coastal States have, in fact, access to comprehensive information with respect to fish stocks, that they have the capability to gather this information and that they have significant management capabilities; this is demonstrably not the case.

95. International cooperation in the management of fisheries is essential. The Single Negotiating Text provides for such cooperation only with respect to highly migratory stocks and marine mammals without, however, suggesting any precise machinery. Cooperation in other cases is essentially at a bilateral level. Within the exclusive economic zone the coastal State has the right to determine fishery management policy almost as it wishes.

96. The concept has been strongly criticized in recent years.

97. Limitation of fishing effort through some international system of licensing of fishing vessels is crucial. The present world fishing fleet can harvest more than double the present catch of living resources.

98. 1958 Geneva Convention on the Continental Shelf, Article 2 (1).

99. In the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State. *Ibidem*, Article 2(2). The natural resources of the continental shelf (*Ibidem*, Article 2 (4)) "consist of the mineral and other non-living organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil." The definition, which could seem clear, has given rise to considerable controversy in its interpretation.

100. *Ibidem*, Article 2 (3).

101. *Ibidem*, Article 4.

102. *Ibidem*, Article 5 (2) - (7).

103. *Ibidem*, Article 3.

104. *Ibidem*, Document A/CONF 62/ WP 8/ Part II, Article 71.

105. *Ibidem*, Article 67. In other words, coastal State consent must be obtained also for non-resource oriented drilling on the continental shelf, such as drill- for scientific purposes.

106. *Ibidem*, Article 65 (3).

107. *Ibidem*, Article 68.

108. *Ibidem*, Article,69 (1).

109. Presumably the proposed International Seabed Authority. The International Authority is also given the function of determining the extent to which developing countries are obliged to make the payments provided for.

110. U.N. Document A/CONF 62/WP 8, Part II, Article 69 (4).

111. U.N. Docment A/CONF 62/WP 8/ Part II, Article 120.

112. *Ibid.* Article 122.

113. *Ibid.* Article 123.

114. For details, see U. N. Document A/CONF 62/WP 8/ Part II, Articles 118-129.

115. 1958 Convention on the High Seas, Article 3.

116. U.N. Document A/CONF/ WP 8/ Part II, Article 109.

117. *Ibidem*,Article 115. It should be noted that the clause "treatment equal to that accorded to their own ships" (i.e., equal to the ships of the country lying between the landlocked State and the sea) contained in Article 3 (1) (b) of the 1958 High Seas Convention, has disappeared.

118. *Ibidem*, Article 113.

119. *Ibidem*, Article 111 (2).

120. The somewhat vague definition of enclosed and semi-enclosed seas is contained in Article 133, Part II of the Single Negotiating Text.

121. U.N. Document A/CONF 62/ WP 8/ Part II, Article 134.

122. *Ibidem*, Article 135.

123. *Ibidem*, Article 136.

124. The group of 77 now comprises more than one hundred developing countries.

Section III

MARINE AREAS BEYOND NATIONAL SOVEREIGNTY OR JURISDICTION (INTERNATIONAL OCEAN SPACE) AND THE RIGHTS AND DUTIES OF STATES THEREIN

According to the present law of the sea, the high seas, comprising all parts of the sea (including the air space above) not included within the territorial sea or internal waters of a State and the seabed and its subsoil beyond the limits of the continental shelf,[1] are open to all States and are subject to a regime of freedom,[2] to be exercised with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.[3]

The Single Negotiating Text proposes to establish two radically different legal regimes in marine areas beyond national sovereignty or jurisdiction by maintaining on the one hand, the traditional regime of the high seas for waters "that are not included in the exclusive economic zone, in the territorial sea, or in the internal waters of a State," and creating, on the other hand, a special regime, based on the principle of common heritage of mankind, for the seabed and ocean floor and their subsoil "beyond the limits of national jurisdiction."

High seas

In the more limited area to which it now applies, the regime of the high seas has been made more specific but remains basically unchanged. The traditional freedoms are maintained[4] and to these are added the freedom to construct artificial islands[5] and other installations permitted under international law and the freedom of scientific research.[6] All freedoms must be exercised "with reasonable regard to the interests of other States." All States, whether coastal or not, retain the right to sail ships under their flag, to fix the conditions for the grant of their nationality to ships, etc.[7] The slave trade and piracy remain prohibited.

The Single Negotiating Text, however, contains some useful elaborations of present law. These may be summarized as follows: (a) modification of Article 7 of the 1958 High Seas

Convention (dealing with the right of States to sail vessels under their own flag), to restrict the meaning of the term "intergovernmental organization" to the United Nations, its Specialized Agencies and the International Atomic Energy Agency; (b) elaboration of the sentence in the 1958 High Seas Convention to the effect that "every State must effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag,"[8] by requiring States to implement this principle by maintaining a register of shipping and by assuming jurisdiction under their municipal law over vessels flying their flag and their crews;[9] (c) elaboration of Article 10 of the 1958 Geneva High Seas Convention by prescribing specifically that among measures to ensure safety at sea, the coastal State must include those measures necessary to ensure that ships flying its flag shall be surveyed by a qualified surveyor at appropriate intervals, have on board charts and instruments appropriate for safe navigation and be in the charge of qualified masters and officers who are, *inter alia*, conversant with the applicable international regulations concerning the safety of life at sea, the prevention of collisions, etc.[10] These provisions are completed by a proposal that every marine casualty or accident causing loss of life or serious damage shall be the subject of inquiry by the flag State before a qualified person(s) and that if "a State has clear grounds to believe that proper jurisdiction and control with respect to a ship have not been exercised [it] may report the facts to the flag State" which is obligated to investigate and, if appropriate, to take any action necessary to remedy the situation;[11] (d) obligation of States to cooperate in the suppression of unauthorized broadcasting; the person responsible may be arrested and prosecuted by the flag State of the vessel or installation, by the State of which the person is a national, by the States in which the transmissions can be received or by those where authorized radio transmissions suffer interference;[12] (e) provision for international cooperation in the suppression of illicit traffic in narcotic drugs,[13] (f) extension of the right of hot pursuit of a foreign ship dealt with in Article 23 of the 1958 Geneva Convention on the High Seas to violations of coastal State laws and regulations in the exclusive economic zone or on the continental shelf, including safety zones around continental shelf installations.[14]

Sea-bed beyond national jurisdiction.

The regime proposed for the sea-bed beyond the limits of national jurisdiction in the Single Negotiating Text is highly innovative and marks a radical departure from traditional law of the sea.

The basic principle on which the regime is based is that the sea-bed beyond the limits of national jurisdiction is a *common heritage of mankind* and, as such, should be reserved for peaceful purposes and used and exploited "for the benefit of mankind as a whole irrespective of the geographical location of States, whether coastal or land-locked, and taking

into particular consideration the interests and needs of the developing countries.[15] In order to implement this principle in practice, an international agency (called the International Sea-bed Authority) is established "through which States Parties shall administer the Area, manage its resources and control the activities of the Area in accordance with the provisions of this Convention."[16]

Definition of the Area

Since the Single Negotiating Text leaves coastal States considerable freedom in determining the limits of their national sovereignty or jurisdiction in ocean space, the international sea-bed area is not defined directly but only by reference to the action taken by the States Parties to the Convention which "shall notify the International Seabed Authority" of the limits of their national jurisdiction over the sea-bed "determined by coordinates of latitude and longitude and shall indicate the same on appropriate large scale charts officially recognized" by the State concerned; the Authority shall register and publish the notifications received.[17]

The question whether a coastal State may subsequently change its national jurisdictional limits and inform the international Authority to this effect is not addressed in the Single Negotiating Text, nor are there provisions making it possible to establish provisional boundaries to the international area in cases where a coastal State may omit to inform the Authority of the limits of its national jurisdiction within a reasonable period of time.

General principles with regard to the Area

The Single Negotiating Text contains a number of general principles applicable to the international sea-bed area which are derived from its status as a common heritage of mankind. These may be summarized as follows:

a. "No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources nor shall any State or person, natural or juridical, appropriate any part thereof."[18]

b. "States shall act in and in relation to the area in accordance with the provisions of this Convention and the United Nations Charter" in the interests of maintaining international peace and Security and promoting international cooperation and mutual understanding.[19]

c. All activities in the Area shall be governed by the provisions of the Convention[20] and shall be

undertaken "for the benefit of mankind as a whole, irrespective of the geographical location of States...and taking into particular consideration the interests and needs of developing countries."[21]

d. The Area is reserved exclusively for peaceful purposes and is open to use, exclusively for peaceful purposes, without discrimination, by all States Parties in accordance with the provisions of the Convention.[22]

e. Development and use of the Area shall be undertaken in such a manner as (a) to foster the healthy development of the world economy and a balanced growth in international trade and (b) to minimize adverse effects on developing countries "resulting from a substantial decline in their export earnings from minerals and other raw materials originating in their territory which are also derived from the Area."[23]

f. Activities in the Area must ensure: orderly and safe development and rational management of resources; expanding opportunities in the use of the Area; conservation and utilization of resources for the optimum benefit of producers and consumers of raw materials; equitable sharing of benefits with particular consideration to the interests and needs of developing countries whether land locked or coastal.[24]

g. Scientific research, as all other activities, in the Area shall be carried out exclusively for peaceful purposes and for the benefit of mankind as a whole.[25]

h. Appropriate measures shall be taken for the adoption and implementation of international rules, standards and procedures for the prevention of pollution, contamination and other hazards to the marine environment and for the protection and conservation of the natural resources of the Area.[26]

The Single Negotiating Text also contains a number of general provisions, not immediately derived from the basic principle of common heritage, with regard to (a) a central role for the proposed International Seabed Authority in the conduct of scientific research and the participation of developing countries therein,[27] (b) the transfer of technology and scientific knowledge relating to the international seabed area,[28] (c) the protection of human life,[29] (d) accommodation of different activities in the Area,[30] (e) the responsibility

of States to ensure compliance with the provisions of the Convention and their liability for damage caused by their activities in the Area[31] and, finally, (f) the rights of coastal States.[32]

Comments and Suggestions

While the basic concept of the traditional regime of the High Seas remains unchanged, important developments of present international law are proposed: particularly significant, and welcome, are the modernization of the law with regard to shipping and the specific obligation requiring States to cooperate in the management and conservation of the living resources of the High Seas.[33] However, little provision has been made to coordinate the regime of the High Seas with the regime proposed for the seabed beyond national jurisdiction.[34] The basic question remains as to whether even a modernized regime of the High Seas is viable in contemporary conditions, except in increasingly remote areas of the oceans. Certainly the jurisdictional vacuum existing with respect to the waters beyond national jurisdiction permits, indeed encourages, continued expansion of coastal State jurisdiction, as technology advances and exploitation of resources intensifies. For this reason alone, serious consideration should be given to establishing for the waters of the ocean a regime based on the principle of common heritage of mankind.[35]

A number of questions arise with regard to the seabed regime proposed in the Single Negotiating Text.

The area covered by the regime is subject to re-definition at the discretion of coastal States.[36] This is an unsatisfactory state of affairs and it is proposed that (a) consideration be given to enabling the proposed International Seabed Authority to object to the limits notified to it by coastal States in the event that such limits do not appear to conform to the provisions and criteria contained in Part II of the Single Negotiating Text with regard to the limits of national jurisdiction; (b) some provision be elaborated limiting the power of coastal States to redefine their jurisdictional limits with regard to the Authority. It is also suggested that the seabed surrounding the land area of Antarctica be explicitly included in the international seabed area.[37]

It is not clear what activities in the international seabed area are governed by the proposed regime.[38] It is suggested that the matter be clarified by changing the formulation of Article 6 (Part I) to read, "*all* activities in the area shall be governed...." If political considerations require some activities to be excepted from the regime, these activities should be specifically enumerated.

The provisions on scientific research (Article 10, Part I) are in part not easy to reconcile with the corresponding provisions in Part III of the Single Negotiating Text. It is suggested that the provisions contained in Part III be fully reconciled with those in Part I.

The provisions relating to the protection of the marine environment (Article 12, Part I) do not mention the proposed Authority. It is suggested that this article be amended to provide a specific environmental protection role for the Authority.

It is noted, finally, that none of the specific activities mentioned in Articles 10-16 and 19 of Part I are meaningfully implemented in that part of the Single Negotiating Text dealing specifically with the future International Seabed Authority.

Footnotes

1. This is the prevalent opinion; some authors, however, have been of the opinion that, because of the exploitability criterion in the 1958 Continental Shelf Convention, all parts of sea-bed of the oceans are, potentially, part of the legal continental shelf.

2. The freedoms specifically recognized are: freedom of navigation, freedom of fishing freedom to lay submarine pipelines and cables, and freedom of overflight, together with other freedoms"recognized by the general principles of international law." (A sentence generally held to include the freedom of scientific research.)

3. 1958 High Seas Convention, Articles 1 and 2.

4. U.N. Document A/CONF 62/ WP 8/ Part II, Article 75 (1). The freedom of fishing, however, has been made subject to "the rights and duties, as well as interests of coastal States" and to the obligation "to cooperate with other States in adopting such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas;" to cooperate in establishing subregional or regional fishery organizations and to exchange regularly scientific data and statistics through such organizations. In addition States have the duty, in determining the allowable catch and other conservation measures, to adopt measures designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield taking into account a number of enumerated factors, including the special requirements of developing countries. See, *Ibidem,* Part II, Articles 103-105.

5. Subject to the obligations enumerated in Document A/ CONF 62/WP 8/ Part II, Article 48 (3) to (8).

6. Subject to the provisions contained in Document A/ CONF/ WP 8/ Part III (Marine Scientific Research) Articles 27-36 and in particular Article 25 (3) and (4).

7. The Single Negotiating Text Part II, Articles 76-78, 80 (3), 81-93, 96-97, 99-102 reproduces often textually the text of Articles 4, 5, 6, 10(1), 9, 11-21, 23, 26, 27, 28 of the 1958 Geneva Convention on the High Seas.

8. 1958 High Seas Convention, Article 5 (1).

9. U.N. Document A/CONF 62/ WP 8/ Part II, Article 80 (2).

10. *Ibidem,* Article 80 (4).

11. *Ibidem,* Article 80 (6) and (7)

12. *Ibidem*, Article 95.

13. *Ibidem*, Article 94.

14. *Ibidem*, Article 97. It is interesting to note that the provision in the 1958 Geneva Convention on the High Seas (Article 23 (2) to the effect that "the right of hot pursuit ceases as soon as the ship pursued enters the territorial sea of its own country or of a third State" has been retained unaltered in the Single Negotiating Text (Part II, Article 97 (2))with the anomalous result that, a coastal State's ships may be freely pursued within its exclusive economic zone by foreign warships despite the comprehensive powers that the coastal State exercises within its economic zone.

15. U.N. Document A/CONF 62/ WP 8/ Part I, Articles 3 and 7. The proposed seabed regime does not affect "the legal status of the waters superjacent to the area or that of the airspace before those waters" (*Ibidem* Part I, Article 15).

16. *Ibidem*, Articles 20 and 21. The drafting of the sentence quoted could be improved; probably the words "control the activities of the area" should read "regulate and/or supervise activities *in* the area."

17. U.N. Document A/CONF 62/ WP 8/ Part I, Article 2. The passive role of the Authority should be noted: the Authority may not question the limits of national jurisdiction notified to it nor is there anything in the proposed Convention limiting the right of coastal States to redefine as often as they wish the boundaries of their national jurisdiction within the broad limits set in Part II of the single negotiating text. Thus the extent of the international seabed area could decrease with the passage of time.

18. *Ibidem*, Article 4. This article also proposes that no claims, acquisition or exercise of rights with regard to minerals, in their raw or processed form, derived from the area shall be recognized except in accordance with the provisions of the proposed Convention.

19. *Ibidem*, Article 5.

20. *Ibidem*, Article 6.

21. *Ibidem*, Article 7.

22. *Ibidem*, Article 8. The term "exclusively for peaceful purposes" is not defined.

23. *Ibidem*, Article 9 (1).

24. *Ibidem*, Article 9 ( ).

25. *Ibidem*, Article 10 (1)

26. *Ibidem*, Article 12.

27. U.N. Document A/CONF 62/ WP 8/ Part I, Article 10.

28. *Ibidem*, Article 11.

29. *Ibidem*, Article 13.

30. *Ibidem*, Article 16: "Activities in the area shall be carried out with reasonable regard for other activities in the marine environment."

There are special rules with regard to stationary and mobile installations reproducing, suitably modified, rules contained in other parts of the Single Negotiating Text, thus such installations do not have the status of islands, must be used exclusively for peaceful purposes, must not obstruct sea lands of vital importance, must be "erected, emplaced and removed solely in accordance with the provisions of this Convention and subject to rules and regulations prescribed by the Authority. The erection, emplacement and removal of such installations shall be the subject of timely notification through Notices to Mariners..."

. *Ibidem*, Article 17.

. *Ibidem*, Article 14. The provisions on the rights of coastal States are important: they provide for a system of prior notification and consultations with the coastal States concerned before activities are undertaken in the international area with regard to resources which "lie across" the limits of national jurisdiction: such activities must be conducted with due regard to the legitimate interests of these States Coastal States also are recognized the right to take such measures as may be necessary to "prevent", mitigate or eliminate grave and imminent danger to their coastlines or related interests from the threat of pollution or from other hazardous occurrences resulting from activities in the area. This provision is interesting since the coastline referred to will be more than 200 nautical miles distant.

33. U. N. Docment A/CONF 62/ WP 8/ Part II, Articles 103-106.

34. Particularly with respect to the laying of submarine cables and pipelines, and the use of the sea-bed for installations of a potentially military character.

35. In addition, of course, the oceans beyond national jurisdiction contain substantial living resources (about 10 percent of world fish catch) and could, perhaps, be used at some future date for a number of economic purposes. A common heritage regime for the oceans beyond national jurisdiction would facilitate international cooperation in the management of fish stocks, would facilitate development of international criteria for the accommodation of ocean uses and could have a number of other useful purposes.

36. Within the framework of the flexible criteria proposed in Part II of the Single Negotiating Text.

37. The area contains considerable resources which could be developed for the benefit of mankind.

38. In particular, there is no reference to the living resources of the sea-bed.

Section IV

GENERAL NORMS CONCERNING THE RIGHTS AND DUTIES OF STATES IN OCEAN SPACE AS A WHOLE

The Geneva Conventions of 1958 contain few general norms concerning the rights and duties of States in ocean space as a whole. Among these are: (a) the general rule that a State must exercise its rights and perform its duties with due regard to the rights and duties of other States; (b) general rules and norms concerning merchant and warships;[1] (c) a general rule intended to ensure that owners of ships who can prove that they have sacrificed an anchor, a net or any other fishing gear to avoid injuring a submarine cable or pipeline shall be indemnified by the owner of the cable or pipeline;[2] (d) the obligation for every State to adopt effective measures to prevent and punish the transport of slaves in ships authorized to fly its flag;[3] (e) the obligation of all States to cooperate in the suppression of piracy in any place outside the jurisdiction of any State;[4] (f) the obligation of all States to cooperate with the competent international organizations in taking measures for the prevention of pollution of the seas or air space above, resulting from any activities with radio-active materials or other harmful agents;[5] and (g) the obligation of States to draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil together with the duty to take measures to prevent pollution of the seas from the dumping of radio-active waste.[6]

The Single Negotiating Text maintains unchanged the existing obligations of States with regard to the suppression of piracy and transport of slaves[7] as also the rule intended to compensate owners of ships for equipment lost in avoiding injury to pipelines and cables.[8] The rules concerning merchant vessels have been modernized with a view to ensuring greater control by the flag State in administrative, technical and social matters over ships sailing under its flag.[9]

Major innovations are new general norms requiring States to cooperate in various ways in ocean space and the establishment of a system of general rules with regard to the protection of the marine environment, scientific research and transfer of marine technology which could represent a significant development in the law of the sea.

The duty of cooperation is extended to the suppression of illicit traffic in narcotic drugs,[10] to the suppression of unauthorized broadcasting from the high seas,[11] and to the conservation and management of marine mammals and highly migra-

tory species of fish.[12]

The Single Negotiating Text proposes a detailed system of basic legal obligations to protect and preserve the marine environment and attempts to balance these obligations with a due regard to the legitimate uses of ocean space. The system may be summarized as follows:

(a) States have the obligation to protect and preserve all the marine environment[13] and to take all necessary measures to prevent, and control its pollution[14] from any source using for this purpose the best practicable means at their disposal, in accordance with their capabilities.[15] States shall also take "all necessary measures to ensure that marine pollution does not spread outside their national jurisdiction..."[16] In taking these measures States "shall guard against the effect of merely transferring, directly or indirectly, damage or hazards, from one area to another or from one type of pollution to another."[17]

(b) States have an obligation to "cooperate on a global and, as appropriate, regional basis, directly or through competent international organizations, global or regional, to formulate...international rules, standards and recommended practices and procedures...for the prevention of marine pollution."[18] A State "which becomes aware of cases in which the marine environment is in imminent danger must immediately nofity States likely to be affected and competent international organizations".[19] States must also cooperate in scientific research and data exchange programs concerning pollution and in eliminating the effects of pollution.[20]

(c) States have an obligation "either directly or through competent international or regional organizations" to take a variety of educational, technical and other measures to assist developing countries in the preservation of the marine environment.[21]

(d) States, "consistent with the rights of other States" and "as much as is practicable," have an obligation to endeavor to monitor the marine environment for pollution and to report the results to the United Nations Environment Programme or to any other competent international or regional organization.[22]

(e) States shall, "as far as practicable, assess the potential effects of planned activities under their jurisdiction which may cause substantial pollution of the marine environment and report the results of such assessments to the United Nations Environment Programme or other competent organizations.[23]

(f) States have an obligation to establish national laws and regulations to prevent and control pollution of the marine environment from land-based and atmospheric sources and to endeavor to establish global and regional rules, standards and

recommended practices and procedures in this connection,[24] taking into account (for landbased sources only) regional features, the economic capacity of developing countries, and their need for economic development.

(g) States have an obligation to establish national laws and regulations to prevent and control pollution of the marine environment arising from exploration and exploitation of the seabed and from installations under their jurisdiction[25] as also from dumping of wastes and "other matter."[26] Such nationl laws shall be no less effective[27] than global rules and standards. States must establish global and regional rules, standards and recommended procedures for pollution arising from seabed exploitation and shall *endeavor* to establish such rules for the dumping of wastes. Dumping is not permitted without permission of the competent Authorities of States.

(h) States have an obligation to establish as soon as possible and to the extent that they are not already in existence, international rules and standards for vessel source pollution and must establish national laws and regulations in this connection which are *no less* effective than international rules and standards.[28] The coastal State may establish *more* effective laws and regulations in its territorial sea provided they do not[29] have the practical effect of hampering innocent passage. In addition the coastal State may establish appropriate non-discriminatory laws and regulations for the protection of the marine environment in areas within the economic zone where particularly severe climatic conditions create exceptional hazards to navigation and where pollution could cause major harm to the ecological balance.[30]

Enforcement of laws and regulations with regard to atmospheric and land-based sources of pollution is left generically to "States,"[31] presumably the State within the jurisdiction of which the pollution originates. Laws and regulations concerning marine pollution arising from seabed exploration and exploitation are enforced by the coastal State within its legal continental shelf and by the International Seabed Authority in cooperation with the flag States in the area beyond national jurisdiction,[32] while the laws and regulations for the protection of the marine environment from dumping at sea are enforced: (a) by any State within its territory; (b) by the flag State with respect to vessels and aircraft registered in its territory of flying its flag; (c) by the coastal State on vessels and aircraft engaged in dumping within its exclusive economic zone and continental shelf; (d) by the port State on vessels and aircraft loading at its facilities or offshore terminals.[33]

The rules proposed by the Single Negotiating Text with respect to vessel source pollution are quite detailed in an attempt to balance the rights and claims of coastal States with

the interests of international navigation. The general effect of these provisions is (a) to require the flag State to investigate, at the documented request of any State, violations of international rules and standards for the control of marine pollution by its vessels. If there is sufficient evidence of a violation, the flag State must institute legal proceedings. Penalties under the flag State's legislation must be adequate to discourage violations and equally severe, regardless of where the violations occurred;[34] (b) to permit a coastal State to investigate and institute proceedings against a vessel transiting its territorial sea when the vessel has violated international rules and standards.[35] The vessel may be required to provide identification and other specified information by radio or other means of communication when the coastal State has reasonable ground for believing that it has violated international rules and standards by releasing discharges within an as yet unspecified distance from the baseline from which the territorial sea is measured;[36] on the other hand, a vessel transiting an area extending an as yet unspecified distance from the baseline from which the territorial sea is measured, may be stopped and boarded when the violation has been of a flagrant character causing severe damage or threat of severe damage to the marine environment or if the vessel is proceeding to or from the internal waters of the coastal State;[37] (c) to permit a State, within one of the ports of which a vessel voluntarily finds itself, to undertake an immediate investigation of suspected violations of international rules and standards regardless of where they occurred, and to prevent the vessel from sailing if it presents an excessive danger to the marine environment.[38] If the port State has reasonable grounds for believing that the vessel has released a discharge at an as yet unspecified distance from the baseline used for measuring the territorial sea, it may institute proceedings and, if necessary, arrest the vessel.[39]

The remainder of the general provisions contained in the Single Negotiating Text with regard to the protection and preservation of the marine environment concern the questions of responsibility and liability for damages,[40] sovereign immunity[41] relationship with other environmental conventions[42] and settlement of disputes.[43]

The Single Negotiating Text also contains general norms with regard to the conduct of marine scientific research and to the transfer of marine technology which either elaborate considerably upon traditional law of the sea or are entirely novel.

While affirming explicitly the right of all States and "appropriate international organizations" to conduct marine scientific research,[44] and their obligation to endeavor to promote such research "not only for their benefit but also for the benefit of the international community," the Single Negotiating Text states that scientific research is conducted

subject to the rights of coastal States.[45] In addition, scientific research must be conducted "exclusively for peaceful purposes," without interference with other legitimate uses of the sea, and must comply with regulations established in conformity with the Convention for the preservation of the marine environment.[46] Marine scientific research activities cannot form the legal basis for any claim to any part of the marine environment or to its resources. Additional articles set forth the obligation of States to cooperate in the promotion of marine scientific research and to facilitate effective international communication of proposed major programs and the publication and dissemination of their results.[47] The remaining general provisions concern norms on the status of scientific equipment in the marine environment and on the measures required for its identification and protection.[48] Finally the provisions on marine scientific research in the Single Negotiating Text are completed by provisions on responsibility and liability and settlement of disputes.[50]

General provisions on the Development and Transfer of Technology in the Single Negotiating Text establish the obligation of all States to cooperate in the active promotion of the development and transfer of marine science and technology at fair and reasonable terms, conditions and prices, with particular regard to developing countries;[51] to this end a number of measures are recommended.[52] Further obligations are established on all States to "promote the establishment of universally accepted guidelines for the transfer or marine technology," "to endeavor to ensure that international organizations coordinate their activities in this field," and "to cooperate actively with the International Seabed Authority to facilitate the transfer to developing States of skills and technology with regard to the exploration of the international seabed area and the exploitation of its resources.[53] Finally, the Single Negotiating Text establishes a duty for all States to "promote, within their capabilities, the establishment, especially in developing States, of regional marine scientific and technological centers in coordination with the International Seabed Authority when appropriate as well as with other international and national marine scientific and technological institutions in order to stimulate and advance the conduct of marine scientific research by developing countries."[54] The proposed functions of these institutions are outlined in the following Article.

Comments

Many of the provisions in this section are constructive and constitute a considerable development of present international law. Nevertheless the approach is still fragmentary, and the elaboration of general norms with regard to the rights and duties of States in ocean space as a whole is attempted only with regard to the protection of the marine environment, scientific research and the transfer of technology.

The general obligation of States to protect and preserve all the marine environment from pollution from any source is clearly set out: this obligation is balanced by a statement setting forth the sovereign right of States to exploit their natural resources pursuant to their environmental policies and their duty to take into account their economic needs and their programs of economic development.

The general obligation of States to cooperate at all levels to formulate international rules and standards for the prevention of pollution is clearly stated; unfortunately, however, the comprehensive formulations used in the Single Negotiating Text are vague. No specific machinery to implement the duty of cooperation is mentioned and the impression is left that it is envisaged that international cooperation with regard to marine pollution will continue to take place as it does at present; that is to say in a fragmentary manner in a multitude of forms.

The provisions on technical assistance with regard to the control of marine pollution are more specific, but they add little or nothing to the present situation in this respect and also fail to provide an implementation machinery.

Indeed, except with regard to vessel source pollution, the obligations of States with regard to marine pollution are of a general nature and lack an implementation machinery in the Single Negotiating Text, apart from the dispute settlement machinery in Part IV of the Single Negotiating Text (document A/CONF 62/ WP 9). This is particula ly unfortunate with regard to the sea beyond national jurisdiction for which no entity is responsible.

Much attention is given to vessel source pollution (which is responsible globally for about 10 percent of marine pollution) and particularly to the respective competence of flag, port and coastal States in the enforcement of regulations and standards. It is important to note in this connection that exclusive flag State enforcement jurisdiction is considerably weakened in the articles proposed by the Single Negotiating Text, while at the same time the

references to international rules and standards, while numerous, are vague; no specific proposals are made for their speedy elaboration and no international enforcement procedures are proposed. It may thus be predicted that coastal (and port) States will exercise increasingly the powers recognized to them in the Single Negotiating Text, with the clear possibility that such powers may also be used in a manner that will hamper navigation and other legitimate uses of the sea.[56]

Finally while the responsibility of States that activities under their control do not cause damage to the marine environment is clearly affirmed,[57] the difficult question of liability is addressed somewhat vaguely and liability is excluded altogether with regard to the marine environment beyond areas where States exercise sovereign rights.

Again with regard to scientific research, there is a notable difference between the general norms enunciated and the manner of their implementation.

One can only welcome the solemn and explicit statement that all States have a right to conduct scientific research in the marine environment, that such research should be conducted not only for their own benefit but also for the benefit of the international community, and that it must be conducted exclusively for peaceful purposes. It is somewhat surprising in the light of these statements, that most articles in Part II and Part III of the Single Negotiating Text dealing with scientific research restrict in nearly half the area covered by the oceans the proclaimed right of States to conduct scientific research, and subject the publication of the results of scientific research to the possibility of a veto by the coastal State. There is also no provision whatsoever designed to ensure, or even to ascertain, whether marine research is conducted "exclusively for peaceful purposes."[59]

The provisions with regard to international cooperation in marine scientific research are excellent, but the Single Negotiating Text fails to suggest any specific implementation procedures.

The Single Negotiating Text establishes the excellent principle that all States have the obligation to promote the development and transfer of marine science and technology at fair and reasonable terms and must cooperate in this connection; but despite the detailed enumeration of the measures which States must take,[60] the provisions contained in the Single Negotiating Text appear somewhat unreal in view of the lack of any implementation machinery, indeed some articles in the Single Negotiating Text would appear to suggest that no significant change of the present situation is expected.[61]

Footnotes

1. 1958 Geneva Convention on the High Seas, Article 5-12.

2. *Ibidem*, Article 29.

3. *Ibidem*, Article 13.

4. *Ibidem*, Articles 14- 2..

5. *Ibidem*, Article 25 (2).

6. *Ibidem*, Articles 24 and 25 (1). In addition the 1958 Geneva Conventions include of course general norms applicable to specific areas of the marine environment such as the high seas or territorial sea.

7. UN document A/CONF 62/WP 8/Part II, Articles 85-93.

8. *Ibidem*, Article 102.

9. See *ibidem*, Articles 77,78, 80-84.

10. *Ibidem*, Article 94.

11. *Ibidem*, Article 95.

12. *Ibidem*, Article 53 (2) (3).

13. UN document A/CONF 62/WP8/Part III (Protection and preservation of the Marine Environment), Article 2. This obligation is qualified by the statement that "States have the sovereign right to exploit their natural resources...and they shall, in accordance with their duty to protect and preserve the marine environment take into account their economic needs and their programs for economic development. *Ibidem*, Article 3.

14. Pollution of the marine environment is defined as "the introduction by man, directly or indirectly, of substances or energy in the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities."

15. *Ibidem*, Article 4 (1).

16. *Ibidem*, Article 4 (2)

17. *Ibidem*, Article 5.

18. *Ibidem*, Article 6

19. *Ibidem,* Article 7.

20. *Ibidem,* Article 9.

21. *Ibidem,* Article 11. Developing countries are also recognized preference, for the purpose of prevention of marine pollution, in the allocation of funds and utilization of specialized services of international organiaations. *Ibidem,* Article 12.

22. *Ibidem,* Articles 13 and 14.

23. *Ibidem,* Article 15. The Article states that the results should be reported "in the manner provided in paragraph 2 of Article 13" but this paragraph deals with a different subject. It is accordingly assumed that there is an error in the text and that the clause should read "in the manner provided for in Article 14." The similarity between the "environmental assessments" required in Article 15 of the Single Negotiating Text and the "environmental impact statements" required by United States law should be noted.

24. *Ibidem,* Articles 16 and 21.

25. *Ibidem,* Article 17.

26. *Ibidem,* Article 18.

27. In case of pollution arising from seabed exploration and exploitation national laws "shall be no less effective than generally accepted international rules, standards and recommended practices and procedures."

28. UN document A/CONF 62/ WP 8/Part III (Protection and Preservation of the Marine Environment), Article 20 (1) (2).

29. *Ibidem,* Article 20 (3).

30. *Ibidem,* Article 20 (5). The Single Negotiating Text also contains a provision to the effect that where international standards do not exist or are inadequate and where there are reasonable grounds for believing that in a particular area of an economic zone special mandatory measures for the prevention of pollution from vessels are required, the coastal State may apply to the competent international organization for the area to be recognized as a *special area.* *Ibidem* Article 20 (4).

31. *Ibidem,* Articles 22 and 40.

32. *Ibidem,* Articles 23 and 24.

33. *Ibidem,* Article 25.

34. *Ibidem,* Article 26.

35. *Ibidem*, Article 28 (1). The coastal State may initiate an investigation at the request of another State when there has been a discharge within an as yet unspecified distance "from the baseline from where the territorial sea of the requesting State is measured." In this case the flag State must be informed.

36. *Ibidem*, Article 30. In taking the actions noted in the text the coastal State must not discriminate among foreign vessels (Article 38); must immediately release an arrested vessel if bond is posted (Article 30), must immediately inform the consular or diplomatic representatives of the flag State of the vessel against which any measures are taken; must provide for recourse in its courts in respect of loss or damage resulting from inspection or application of other measures where they exceed those that were reasonably necessary (Article 37); nor, it would appear, may a coastal State detain or arrest a vessel in straits covered by the regime of transit passage (Article 39).

37. *Ibidem*, Article 31.

38. The results of the investigation must be immediately notified to the flag State. *Ibidem*, Article 27 (1) (2).

39. *Ibidem*, Article 27 (3).

40. *Ibidem*, Article 41.

41. *Ibidem*, Article 42.

42. *Ibidem*, Article 43.

43. *Ibidem*, Article 44. This article is of great importance in view of the critical need to avoid unjustified hampering of navigation.

44. UN document A/CONF 62/WP 8/ Part III (Marine Scientific Research), Article 2. Marine Scientific research is defined as "any study or related experimental work designed to increase man's knowledge of the marine environment." See, *ibidem*, Article 1. Marine scientific research is not mentioned in the 1958 Geneva Convention on the High Seas, but is generally considered to be included in the other freedoms of the high seas referred to in Article 2 of that Convention; accordingly the freedom of scientific research must be exercised "with reasonable regard to the interests of other States in their exercise of the freedom of the high seas."

45. *Ibidem*, Article 5.

46. *Ibidem*, Article 4.

47. *Ibidem*, Articles 8-12.

48. *Ibidem*, Articles 27-33. The general provisions contained in the Single Negotiating Text should facilitate the conclusion of the detailed convention on the status of scientific equipment in the marine environment which has been under consideration by UNESCO for several years.

49. *Ibidem*, Articles 34-36.

50. *Ibidem*, Article 37. It may be useful to summarize the regime for marine scientific research proposed in the Single Negotiating Text:

(a) All States and appropriate international organizations have the right to conduct marine scientific research subject to the provisions of the proposed Convention;

(b) All States have an obligation to promote marine scientific research and to disseminate its results;

(c) Marine scientific research may be conducted only for exclusively peaceful purposes.

(d) All States and appropriate international organizations have the right to conduct marine scientific research on the high seas and in the international seabed area in accordance with the provisions of the proposed Convention (in the case of the international seabed area, the research program must be communicated to the International Seabed Authority and the results must be made internationally available; when resource oriented research is planned in an area immediately adjacent to the economic zone or continental shelf of a coastal State, the State concerned may request the fulfilment of a number of conditions).

(e) Marine scientific research in the territorial sea may be conducted only with the explicit consent of, and under conditions established by, the coastal State;

(f) Marine scientific research which is of a fundamental nature may be conducted in other areas under State jurisdiction subject to notification to the coastal State and to the conditions enumerated in the Single Negotiating Text; resource oriented research is subject to the explicit consent of the coastal State and to the conditions enumerated in the Single Negotiating Text.

51. UN document A/CONF 62/WP 8/Part III (Development and Transfer of Technology), Article 1.

52. For details, see *ibidem*, Articles 3 and 4. The

formulation used in the Articles employs the imperative "shall" which would appear to establish an obligation on States. This, however, is probably not intended since it would have inappropriate results: land-locked countries, for instance, would find themselves under a duty, inter alia, to "promote the development of appropriate marine technology," (Article 3 (b)).

53. *Ibidem,* Articles 5-8.

54. *Ibidem,* Article 10.

55. Except with regard to pollution arising from activities covering the exploration and exploitation of the sea-bed beyond national jurisdiction.

56. All ships necessarily pollute to some extent the marine environment; the distinction between pollution with little adverse environmental effect and dangerous marine pollution is obvious in extreme cases but is largely a matter of opinion in the majority of cases.

57. U. N. Document A/CONF 62/ Part III (Protection and Conservation of the Marine Environment) Article 41 (1) (2).

58.. U.N. Document A/CONF 62/ WP 8/ Part III (Marine Scientific Research) Article 21 (c).

59. This, of course, is a very difficult matter to ascertain, but then what is the purpose of asserting the principle that marine scientific research must be conducted exclusively for peaceful purposes.

60. The detailed enumerations contained in Part III (Transfer of Technology), Articles 3 and 4, may be counter-productive because necessarily vague and because they might suggest that there is no obligation in respect of any matter included therein. The articles in the Single Negotiating Text concerning regional marine scientific and technological centers appear questionable; the centers could undoubtedly be useful, but there would seem to be little justification for imposing an obligation to all States to promote them. The matter should be handled at the regional level and through an appropriate provision in Part I of the Single Negotiating Text which deals with the International Seabed Authority.

61. For instance, *Ibidim,* Articles 5 and 7.

PART II

Section I

INSTITUTIONAL REQUIREMENTS OF THE INTERNATIONAL MANAGEMENT OF MINERAL MINING

Scope and functions of the International Seabed Authority

The Single Negotiating Text establishes the basic principle that the International Seabed Authority is"the organization through which State Parties shall administer the Area,[1] manage its resources and control the activities of the area in accordance with the provisions of this Convention."[2] The Authority is based on the principle of sovereign equality of all its Members, who have the duty to fulfil in good faith the obligations assumed by them under the proposed Convention.[3]

It is proposed that "activities in the Area shall be conducted directly by the Authority,"[4] which may "if it considers it appropriate, and within the limits it may determine," carry out activities "through States Parties to this Convention, or State enterprises, or persons natural or juridical which possess the nationality of such States...by entering into service contracts, or joint ventures or any other such form of association which ensures...direct and effective control at all times over such activities."[5]

While, in principle, the Authority is recognized jurisdiction over all activities in the Area, articles relating to activities other than mineral resource exploration and exploitation are both few and general in nature. They may be summarized as follows:

a. "The Authority may itself conduct scientific research and enter into agreements for that purpose:" The Authority shall be the center for harmonizing and coordinating scientific research. States Parties to the proposed convention have a duty to "promote international cooperation in scientific research in the Area exclusively for peaceful purposes by: (i) participation in international programs...(ii) ensuring that programs are developed through the Authority for the benefit of developing countries...(iii) effective publication of research programs and dissemination of

the results of research through the Authority."[7]

b. The Authority and, through it, States Parties to the Convention have the duty to take all necessary measures to promote the transfer of technology and scientific knowledge relating to activities in the Area,[8] in this connection the Authority is required to ensure that "nationals of developing countries...be taken under training as members of the managerial, research and technical staff constituted for its undertakings"; that "technical documentation on the relevant equipment, machinery, devices and processes be made available to all developing countries upon request;" that "adequate provisions are made by it to facilitate the acquisition by any developing State...of the necessary skills...including professional training," that "developing States are assisted in the acquisition of necessary equipment, processes, plant and other technical knowhow through a special fund...designed for this purpose."[9]

c. The Authority and States, with respect to "*activities* in the Area, "shall take appropriate measures for the adoption and implementation of international rules, standards and procedures for the protection of human life to supplement existing international law...."[10]

d. The Authority is given the power to preserve and dispose of all objects of an archaelogical or historical nature found in the Area "for the benefit of the international community as a whole,"[11] "and to regulate, without prejudice to the rights of the owner, the recovery and disposal of wrecks and their contents more than 50 years old found in the Area."[12]

e. The Authority is given the power to prescribe rules and regulations with regard to stationary and mobile installations "relating to the conduct of activities in the Ares."[13]

The Single Negotiating Text is rather vague concerning the powers of the Authority with regard to the protection and preservation of the marine environment. On the one hand, the Single Negotiating Text establishes for the Authority the obligation to enforce "in cooperation with the flag States, the rules and standards adopted in accordance with the provisions of this Convention for the protection and preservation of the marine environment from pollution arising from activities concerning exploration and exploitation of the international sea-bed area."[14] On the other hand, the Single Negotiating Text states that "appropriate measures shall be taken

for the adoption and implementation of international rules, standards and procedures...the prevention of pollution... and other hazards to the marine environment...particular attention being paid to the need for protection from the consequences of such activities as drilling, dredging, excavation installations, pipelines and other devices...."[15]

A similar vagueness affects the provisions of the Single Negotiating Text with respect to the responsibility of States for environmental damage caused to the Area. Part III of the Single Negotiating Text states that "States have the responsibility to ensure that activities under their...control do not cause damage to the marine environment beyond areas where States exercise sovereign rights...,"[16] but this provision is not reproduced in Part I of the Single Negotiating Text which deals specifically with the sea-bed beyond national jurisdiction.[17]

Part I of the Single Negotiating Text finally does not mention the living resources of the Area and, apart from the general references to the activities enumerated above, focuses exclusively on mineral resource exploration and exploitation, particularly the latter.

Structure and organs of the International Sea-bed Authority

The Authority is structured to function essentially as an organization for the exploitation of mineral resources, specifically manganese nodules, beyond the limits of national jurisdiction.

The principal organs of the Authority are: an Assembly, a Council, a Tribunal, an Enterprise and a Secretariat.[18]

It is proposed that the *Assembly*, consisting of all Members of the Authority, meet in regular session every two years; each Member of the Assembly has one vote. Decisions of the Assembly on questions of substance, and on whether a question is one of substance, are made by a two-thirds majority of Members present and voting, provided that the majority includes at least a majority of the Members of the Authority. Decisions on other questions are made by a majority of Members present and voting. An interesting proposal is the provision whereby "upon a written request to the President supported by no less than one-third of the Members of the Assembly, a vote on any matter before the Assembly shall be deferred pending reference to the tribunal for an Advisory Opinion on any legal question connected therewith."[19]

The Assembly is "the supreme policy-making organ of the Authority" and has "the power to lay down general guidelines and issue directions of a general character as to the policy to be pursued by the Council or other organs of the authority on any questions...within the scope of this Convention:" all

powers and functions not specifically entrusted to other organs of the Authority are vested in the Assembly. In addition, the Assembly may discuss any questions within the scope of the Convention and make recommendations thereon.[20]

The *Council* is the executive organ of the Authority and must exercise its powers, described in detail in the Single Negotiating Text, "in a manner consistent with general guidelines and policy directions laid down by the Assembly."[21]

The Council consists of 36 Members of the Authority elected by the Assembly for a term of four years: the Council meets as often as required, but no less than three times a year. Members of the Council are eligible for re-election but "due regard should, as a rule, be paid to the desirability of rotating seats."

The system of election to the Council is somewhat of an innovation in the United Nations system: two-thirds (24) of the Members are elected "taking into account the principle of equitable geographical representation: for this purpose the geographical regions are Africa, Asia, Eastern Europe (Socialist), Latin America and Western Europe and others".[22] A third (12) of the Members of the Council are elected with a view to representation of special interests: six of these Members are elected from those Members of the Authority "with substantial investment in or possessing advanced technology which is being used for the exploration of the Area and the exploitation of its resources and Members which are major importers of land-based minerals which are also produced from the resources of the Area provided only that at the first election at least one of these ...shall be from the Eastern (Socialist) European region." The remaining six Members of the Council are elected "from among developing countries," one being drawn from each of the following categories:

i. States which are exporters of land-based minerals which may also be produced from the resources of the area;"
ii. States importers of these minerals;
iii. States with large populations;
iv. Land-locked States;
v. Geographically disadvantaged States;
vi. Least developed countries.

Each Member of the Council has one vote. Decisions of the Council on important questions "are taken by two-thirds plus one majority of the Members present and voting" while the decision on whether a matter is an important question is taken by a two-thirds majority. Decisions on other questions are taken by a majority of Members present and voting.[23]

Provision is made to permit a Member of the Authority at its request to participate without a vote in the deliberations of the Council.[24]

The Single Negotiating Text establishes as organs of the Council an *Economic Planning Commission* and a *Technical Commission*, each composed of fifteen members appointed by the Council for three years "with due regard to not only the need for Members highly qualified and competent in technical matters...but also to special interests and the principle of equitable geographical distribution."[25] The Council shall invite States Parties to the Convention to submit nominations for appointment to each commission.

The persons appointed to the Commissions serve in their individual capacity and must be "persons of high moral character who may be relied upon to exercise independent judgment. They may be reappointed for one further term of office. The Commissions meet as often as is required for the efficient performance of their functions. Decisions are taken by a "two-thirds majority of the members of the Commission."[26]

The *Economic Planning Commission*, the Members of which must have "qualifications and experience relevant to mining, management of mineral resource activities and international trade and finance," advises the Council with respect to the extent of the seabed area or the volume of its resources which should be made available for exploitation and on "appropriate programs or measures, including integrated commodity arrangements and buffer stock arrangements to avoid or minimize adverse effects on developing countries whose economies substantially depend on the revenues derived from the export of minerals...originating in their territories which are also derived from the resources of the area under exploitation..."[27] Provision is made for mineral exporting countries to "bring to the attention of the Economic Planning Commission a situation which is likely to lead to a substantial decline in their mineral export earnings."

The *Technical Commission* recommends to the Council technical and operational rules for the exploitation of sea-bed resources, prepares environmental assessments, advises the Council on scientific research and transfer of technology, and supervises "all operations with respect to activities" in the area. Members of the Technical Commission are required to have qualifications and experience "in the management of sea-bed resources, ocean and marine engineering and mining and mineral processing..., operation of...marine installations, equipment and devices, ocean and actuarial techniques."[28]

The *Tribunal* is the judicial organ of the International Seabed Authority; it is given jurisdiction over

> "(1) Any dispute relating to the interpretation or application of the convention; and
>
> (2) Any dispute connected with the subject matter of the Convention submitted to it pursuant to a contract or arrangement entered into pursuant to the Convention."[29]

The Tribunal may render advisory opinions at the request of any organ of the Authority. It should be noted that judgments and orders of the Tribunal are final and binding;[30] there is no provision for appeal to the International Court of Justice. The Tribunal consists of nine independent judges, "elected regardless of their nationality from among persons of a high moral character who possess the qualifications required in their respective countries for appointment to the highest judical offices." Members of the Tribunal are appointed by the Assembly upon recommendation of the other members and with the approval of the Council.

All members of the Authority are parties to the Statute of the *Enterprise* which is envisaged as an autonomous organ of the Authority that, under the general supervision of the Council, undertakes "the preparation and execution of activities of the Authority in the Area."[32] The Enterprise may in the exercise of its functions enter into appropriate agreements on behalf of the Authority. The Enterprise has international legal personality and such legal capacity as may be necessary for the performance of its functions. Members of the Governing Board are appointed by the Assembly upon recommendation of the Council on the basis of equal representation of all geographical regions mentioned in connection with elections to the Council (Article 27 (1) (c)). The Enterprise functions in accordance with its Statute.[33]

The Negotiating Text reproduces the substance of several articles of the United Nations Charter with regard to the Secretariat of the Authority.[34] The principal differences are

> (a) Specific provision for the recruitment of qualified scientific and technical staff;
>
> (b) Special obligation on the Secretary-General and the staff to have no financial interest in any activity relating to exploration and exploitation of the Area and not to disclose any industrial secret or confidential information coming to their knowledge by reason of their official duties;[35]

(c) Provision for the establishment of a staff of inspectors to examine activities in the area to determine, and to report to the Secretary-General on, whether the provisions of the Convention, "the rules, regulations, and procedures prescribed thereunder and the terms and conditions of any contract with the Authority...are being complied with."[36]

Financial provisions

The Single Negotiating Text contains a number of provisions concerning the finances of the Authority. The system proposed may be summarized as follows: two funds - a General Fund[37] and a Special Fund - are established. "All receipts of the Authority arising from activities in the Area, including any excess of revenues of the Enterprise over its expenses"[38] are paid into the General Fund in such proportion as the Council shall determine. The expenses of the Authority are met "to an extent to be determined by the Assembly on the recommendation of the Council out of the General Fund, the balance of such expenses (are) to be met out of contributions of Members of the Authority in accordance with a scale of assessment adopted by the Assembly."[39] "Any excess of revenue of the Authority over its expenses...to an extent determined by the Council," all payments received in respect of the annual budget and any voluntary contributions made by States Parties to the Convention are credited to a Special Fund - the amounts available in the Special Fund are equitably apportioned among Members of the Authority "in accordance with criteria, rules, regulations and procedures adopted by the Assembly...."[40]

The budget estimates of the Authority, prepared initially by the Secretary-General, are submitted by the Council to the Assembly, which may reject the estimates received. In this case the Council must submit further estimates to the Assembly.[41] Subject to such limitations as may be approved by the Assembly, the Council may accept voluntary contributions made to the Authority and "may exercise borrowing powers on behalf of the Authority without, however, imposing on Members of the Authority any liability in respect of loans entered into..."[42]

Legal Status of the International Seabed Authority[43]

The authority is recognized "full international legal personality"[44] and such legal capacity as may be necessary for the exercise of its functions and the fulfillment of its purpose. Instead of adopting the general formulation

of Article 105 (2) (93) of the U. N. Charter, the Single Negotiating Text prefers to enumerate, following generally the provisions of the Convention on the Privileges and Immunities of the United Nations, a number of specific privileges and immunities guaranteed to the Authority, to members of any organ of the Authority and to officials of the Secretariat.[45]

Settlement of Disputes

The section on settlement of disputes (Part I, Articles 57-63) in the Single Negotiating Text should be read together with the section on the Tribunal (Part I, Articles 32-34) and with the appropriate provisions of Part IV (Settlement and disputes) of the Negotiating Text which was issued some months after the first three parts.

In principle, any dispute with regard to the application or interpretation of that part of the Convention concerning the international sea-bed area or connected with the subject matter of that part of the Convention[46] may be submitted to the Tribunal for final and binding adjudication if not resolved within one month by the parties through some means of their choice,[47] unless the parties agree to submit the dispute to arbitration.[48]

If the parties to a dispute resolve to resort to arbitration, they shall submit the dispute to an Arbitration Commission composed of three members which "shall have such jurisdiction and shall exercise such powers and functions as the Tribunal..."[49]

Miscellaneous provisions

The most important of these concern

(a) Procedures for amending the Convention;[50]

(b) Provision to the effect that the question of a general review of the Convention shall be placed on the agenda of the third regular session of the Assembly (that is six years) following the coming into force of the Convention;[51]

(c) Provision for the suspension of a Member of the Authority, which has persistently violated the Convention, from the exercise of the privileges and rights of membership;[52]

(d) Provision for provisional application of the

Convention pending completion of ratification procedures.[53]

Annex. Basic conditions of general survey exploration and exploitation

To Part I of the Single Negotiating Text is attached, as an annex, a document entitled Basic Conditions of General Survey Exploration and Exploitation which is intended to clarify and to circumscribe the discretionary exercise by the Authority of its powers with regard to resource oriented activities in the international sea-bed area.

The Annex is divided into three parts. Part A is general in nature. It states the basic principle that since the Area and its resources are a common heritage of mankind all rights in the resources are vested in the Authority on behalf of mankind as a whole. As a consequence the resources cannot be alienated and title to minerals or processed substances[54] may pass from the Authority only in accordance with the provisions of the Convention, the rules prescribed by the Authority and the terms of the relevant contracts.[55]

This part of the Annex also contains general rules for access to the Area and its resources. These may be summarized as folows:

(a) General survey operations, which may be conducted by any entity which meets the environmental protection regulations of the Authority, must be encouraged; to this end the Authority is required regularly to open for general survey such areas of the seabed which may be of interest for this purpose;

(b) The Authority may, upon the proposal of a State Party or on its own initiative, open for exploitation sea-bed areas determined by it to be of commercial interest; the Authority, however, may refuse to open any part of the Area "when available data indicates the risk of irreparable harm to a unique environment or unjustifiable interference with other uses of the Area."[56]

Part B deals with the Enterprise. The Enterprise is permitted at any time to engage in scientific research, exploration of the Area or operations related to evaluation and exploitation of the resources of the Area, including construction of facilities, processing,

transportation and marketing, persuant to a specific Plan of Operations approved by the Council. In the conduct of its operations the Enterprise is subject to the conditions enumerated in Part C of the Annex. The minerals and processed substances produced by the Enterprise may be marketed only in accordance with rules and procedures adopted by the Council in accordance with the following criteria:

(i) The Products of the Enterprise shall be made available to States Parties;[57]
(ii) The Enterprise shall offer its products for sale at international market prices, but may sell at lower prices to developing countries.
(iii) Production and marketing of the resources of the Area by the Enterprise shall be maintained and expanded;
(iv) The Enterprise shall market its products without discrimination.[58]

Part C of the Annex deals with basic conditions of exploitation. The Authority may enter into contracts, joint ventures "or any other such form of association" with qualified applicants for scientific research or for exploration evaluation and exploitation of the Area.[59] All contracts must be in strict conformity with the Convention and must ensure direct and effective fiscal and administrative control by the Authority.[60] The Annex contains detailed procedures for the selection of applicants,[61] the main points of which are:

(i) The Enterprise[62] may not refuse to enter into a contract with a qualified applicant if the financial arrangements are satisfactory "and the contract in all other respects is in strict conformity with the provisions of this Part and of the rules, regulations and procedures adopted thereunder subject to the stated resource policy established by the Authority."
(ii) A contractor that has satisfactorily completed a contract with the Authority has priority among applicants for the award of a contract for one or more further stages of operations with regard to the same area and resources;
(iii) The total number of contracts for evaluation and exploitation entered into by the Authority with a single State Party or with a natural and juridical person under the sponsorship of a single State Party may not exceed an, as yet undetermined, percentage of the total area open for general survey[63] and shall be equal for all States Parties; within these limits the Council may every year determine the number of contracts to be entered into by the Authority with a single State Party.[64]

Paragraph 9 of the Annex requires the contractor, unless otherwise agreed with the Authority, to use his own

funds, materials, equipment and skills for the conductof operations under the contract.[65] The contractor has the duty to transfer to the Authority all data necessary to the effective implementation of the powers and functions of the organs of the Authority in respect of the contract area; the Authority has the obligation not to disclose to third parties transferred data deemed to be proprietary by the contractor;[66] unless otherwise agreed with the Authority the contractor is not obliged to disclose proprietary equipment design data.[67] On the other hand the contractor is obligated "to draw up programs for the training of personnel." The contractor has the right at any time to renounce without penalty the whole or part of his rights in the contract area.

The Authority must accord the contractor

(a) The exclusive right to evaluate and/or exploit the contract area in respect of a specified category of minerals;

(b) Security of tenure except in the case of gross and persistent violations of the provisions of the Annex or of the regulations of the Authority.[68]

The Authority is required to adopt and uniformly apply rules, regulations and procedures consistent with its purposes in respect of a wide variety of enumerated subjects[69]and must apply defined objective criteria[70] in respect of rules, regulations and procedures dealing with the protection of the marine environment, size of the seabed areas allocated to contractors for evaluation and exploitation, duration of activities, performance requirements and categories of minerals. The Authority has the right to take at any time any measures provided for under the Convention to ensure compliance with its terms and may "inspect all facilities in the Area used in connection with any activities in the Area."[71]

The remaining provisions of the Annex deal with suspension or termination of the contractors rights in the contract area, revision of contracts,[72] force majeure transfer of rights,[73] applicable law, liability, settlement of disputes [75]and provisional arrangements.[76]

Comments and suggestions

The part of the Single Negotiating Text dealing with the International Sea-bed Authority (A/CONF 62/WP8/Part I, Part II) contains some interesting proposals; it suffers however, from the fundamental failure to appreciate that an organization designed, for all essential purposes, exclusively for manganese nodule exploration in the sea-bed area beyond national jurisdiction cannot, in the light of developments in other committees of the Law of the Sea Conference, play a significant role in establishing a new legal and economic order in ocean space. From this fundamental error of appreciation flow many of the defects in the Single Negotiating Text.

These observations require an explanation.

The basic assumptions underlying the establishment of an international authority with the functions proposed are that the authority would enjoy a virtual monopoly, at least in the exploration of the manganese nodules of the abyss and that manganese nodule exploration for the benefit of mankind would, or could, make a substantial contribution to meeting the needs of poor countries and that, by virtue of its monopoly, it would constitute an effective mechanism for the transfer of Scientific knowledge and technology. On the other hand, the exploitation of large quantities of manganese nodules from the international sea-bed area might affect prices of manganese, cobalt, nickel, copper and other minerals and thereby adversely affect the economy of countries producing land=based minerals.

These assumptions, however, are now incorrect. Straight baselines of unlimited length and acceptance of the archipelagic principles[77] permit States to enclose extensive areas some of which contain manganese nodules; retention of the legal continental margin, beyond 200 nautical miles from straight baselines, as determined by the coastal State concerned, places, or could place, under national jurisdiction further vast sea-bed areas, several of which contain manganese nodule deposits. Finally the possibility open to coastal States to re-determine at their discretion the limits of their national jurisdiction within the highly flexible baseline and continental shelf criteria proposed in the Single Negotiating Text, will permit national jurisdictional claims to be advanced in respect of sea-bed areas initially part of the international sea-bed area[78] For all these reasons the proposed international Authority will not have anything approaching a monopoly of manganese nodule exploration: manganese nodules can, and will, be exploited within national jurisdiction.[79] From this basic fact flow a number of conclusions, *inter alia*:

(a) Whatever the norms contained in the proposed convention, the Authority will not have the power to determine, at its discretion, the conditions of manganese nodule exploration. The Authority will have to offer conditions of exploration and

exploitation no less favorable than those offered by national authorities. In short the Authority will have to compete if it wishes to develop manganese nodule exploration to any significant extent beyond the very few initial sites which have already been explored and to which companies appear committed;

(b) When manganese nodule exploitation within national jurisdiction develops, the Authority will be obliged to offer *more* favorable conditions for exploitation than those offered by national authorities in order to offset preferential treatment of manganese nodules and of the metals derived thereform produced under national jurisdiction;

(c) Exploitation of significant quantities of manganese nodules will inevitably seriously affect the price of cobalt and of manganese[80] and may have some effect on the price of other minerals.[81] But, since manganese nodules may be exploited both within and outside national jurisdiction, the Authority will not be able to sustain prices merely by curtailing exploitation in the international area. Curtailment of exploitation in the international area, while reducing the revenue of the Authority, could easily be compensated by increased production from areas under national jurisdiction.

(d) The revenue to the International Authority will be low for some decades to come; it is possible that the Authority will not be able to cover from its revenues[82] the cost of the bureaucratic machinery proposed. In any case there will be virtually no amounts to apportion among member States in implementation of the principle of equitable sharing of benefits derived from the international area.[83]

(e) Whatever the provisions of the Convention, the Authority is unlikely to be in a position to compel the disclosure of proprietary design data[84] or advanced technology.

Many provisions in the Single Negotiating Text read strangely in the light of the facts mentioned.

It is more than doubtful that the Authority can implement in any meaningful fashion "the equitable sharing by States in the benefits derived from activities in the Area" (Single Negotiating Text, Part I, Article 23(3)) when the "activities" to which reference is made are exclusively related to manganese nodule exploitation. The provision contained in Article 26 (x) (Part I) also becomes a purely academic exercise in view of the fact that there will be few, if any

> benefits to share. It appears doubtful that the Council could adopt any effective programs "to avoid...adverse effects on the revenues of developing countries derived from the export of minerals and other products originating in their territories which are also derived from the resources of the Area" (Single Negotiating Text, Part I, Article 28 (XI)) or that the Economic Planning Commission proposed can have any practical functions.[85] Nor is it easy to see much practical purpose in the proposal (Single Negotiating Text, Part I, Article 31 (iii) that the Technical Commission "make recommendations to the Council with regard to the carrying out of the Authority's functions with respect to scientific research and transfer of technology" when the Authority will have no significant funds for scientific research and no technology to transfer which is not elsewhere available. What functions can the Enterprise (Part I, Article 35) undertake in the real world? Can it raise the large capital required to initiate operations? Will it be able to compete both with State enterprises and private companies in the international area and with manganese nodule mining within national jurisdiction?
>
> In short, in the light of the realities of the circumstances in which the Authority will operate many of its proposed functions are unrealistic and there is an evident disproportion between the machinery prepared and the functions which can be carried out in practice. Either the structure of the Authority should be much simplified or the nature and functions of the proposed Authority should be re-considered.

There are additional serious defects in that part of the Single Negotiating Text which require comment. Reference will be made only to a few points.

The first point which requires comment is the ambiguous use of the word "activities" in Article 22 (Part I). It is far from clear whether this word is intended to refer to all activities which may be conducted in the international seabed area or only to activities related to mineral resource exploration and exploitation. If reference is intended to all activities (including scientific research) the provisions of Article 22 (1) and (2) would appear excessive and would contradict Article 25, Part III (Marine scientific research) of the Single Negotiating Text.[86] If reference is intended only to mineral resource exploration and exploitation, the Text should be amended.

The international regime for the sea-bed beyond national jurisdiction provides for, assumes or permits the International

Sea-bed Authority to exercise powers with respect to scientific research; transfer of technology; protection of human life; harmonization of activities in the marine environment; protection of the marine environment; installations and with respect to the preservation of objects of an historical or archaelogical nature. No provision is made for any of these subjects in the structure of the Authority apart from permitting the Council of the Authority to adopt rules, regulations and procedures for the protection of the marine environment, the protection of human life and the preservation of objects of archaelogical and historical interest.[87] It is believed that all the activities referred to merit specific provision in the structure of the Authority.

Provisions for elections of members of the Council are based on geographical representation and on the dichotomies "developed and developing countries," "importers and exporters" of raw materials. These latter dichotomies will tend to aggravate existing differences rather than to promote a balanced view of common interests, while on the other hand the representation allotted to each region is not specified.

It is accordingly suggested that the method of elections to the Council be reconsidered.

The Single Negotiating Text does not provide for associate membership of the Authority. It is believed that this would be a desirable optional provision in the case of States with less than a minimum population.

Provisions relating to the Tribunal (Part I, Articles 32-34) are inconsistent with those contained in Part IV of the Single Negotiating Text (document A/CONF 62/WP 9); they should be revised accordingly.

The financial provisions contained in Part I of the Single Negotiating Text (Articles 42-47) are far from clear and should be reviewed.

It is noted that the Authority in conducting its activities may make use only of States Parties to the Convention, State Enterprises or persons natural or juridical which possess the nationality of such States...when sponsored by a State Party..."[88] This position is unfortunate, since not only does it unreasonably limit the discretion of the Authority, but also it makes it impossible for the Authority to promote participation in the exploitation of the international Area of companies and individuals who might offer better terms than the large multinational corporations which, at the present time, predominate in activities relating to manganese nodule exploration.

Finally, the relationship of the proposed Authority with the United Nations system requires clarification.

In conclusion, the proposals contained in the Single Negotiating Text with regard to the International Sea-bed Authority are seriously deficient and make no significant contribution either to world order or to meeting the needs of developing countries.

A new equitable order in the oceans as a new order on land, cannot be established without some sacrifice of immediate interests. If an International Sea-bed Authority is to make a significant contribution to a new order in the oceans, it must have an adequate revenue base. The only way a substantial revenue base can be obtained is either by abolishing the concept of a legal continental shelf extending beyond the exclusive economic zone and by establishing strict criteria for drawing straight baselines or by extending the concept of revenue sharing to sea-bed resources exploited within the exclusive economic zone (with special provisions in this case for developing countries). An adequate revenue base will permit the International Sea-bed Authority effectively to undertake the functions provided for in the articles on the international regime contained in the Single Negotiating Text (Part I, Articles 10-16) and to undertake other useful services for the international community. In addition an adequate revenue base will give the Authority access to significantly useful technology. Lack of an adequate revenue base will doom the Authority to ineffectiveness.[89]

Footnotes

1. The term *Area* or *international seabed Area* will be used throughout this section to indicate "the sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction."

2. UN document A/CONF 62/ WP 8/ Part I, Article 21 (1).

3. *Ibidem*, Article 21 (2) (3).

4. Ibidem, Article 22 (1). The meaning of this basic statement is unclear. The formulation in the Single Negotiating Text would suggest that it is intended that *all* activities in the Area be conducted by the Authority. This interpretation, however, would directly contradict other provisions of the Single Negotiating Text, for instance, Article 25, Part III (Marine Scientific Research) of the negotiating text, where the right of all States to conduct marine scientific research in the Area is affirmed (Part I, Article 10 also states "the Authority may (not shall) itself conduct scientific research). There would also be a direct contradiction with single negotiating text, Part II, Article 75 where the freedom to lay submarine cables and pipelines and the freedom to construct artificial islands and other installations (including sea-bed installations) permitted under international law is explicitly recognized. There would also be a contradiction with Article 6 of Part I which reads "activities in the Area shall be governed by the provisions of this Convention and shall be subject to regulation and supervision by the Authority." On the other hand, Article 22 (1) requires further elaboration if it is interpreted as meaning that only *some* activities in the Area shall be conducted directly by the Authority. Perhaps the most appropriate interpretation of the sentence is to interpret the word *Activities* as activities *relating exclusively to mineral resource exploration and exploitation* this would be consistent with Article 22 (3). It would be useful, however, if the law of the sea conference could clarify the meaning of the paragraph.

5. *Ibidem*, Article 22 (2). In this paragraph also, a question arises as to the precise meaning of the word "*activities*."

6. *Ibidem*, Article 10 (1) (2).

7. *Ibidem*, Article 10 (3). This article, however, does not seem entirely consistent with the Single Negotiating Text, Part III, (Marine scientific research) Article 25 where all States are recognized the right to conduct marine scientific research in the international

sea-bed area subject to notification to the Authority and to various conditions, if resource oriented research is planned in an area immediately adjacent to the economic zone or continental shelf of a coastal State. In this article publication and dissemination of research results take place "*through a readily available scientific publication*" (not through the Authority).

8. *Ibidem*, Article 11: see also UN document A/CONF 62/ WP 8/ Part III (Development and transfer of Technology), Article 8.

9. UN Document A/CONF 62/ WP8/ Part III, (Development and transfer of technology), Article 9. See also ibidem, Article 10, where it is suggested that the International Seabed Authority cooperate in the creation of "regional marine scientific and technological centres." While the thrust of the provisions on transfer of technology in Part I and Part III of the Single Negotiating Text is similar, the formulations adopted would appear to require greater coordination and perhaps some redrafting.

10. UN document A/CONF 62/ WP 8/ Part I, Article 13. The precise meaning of this article is far from clear. Do States and the Authority act in cooperation with regard to the protection of human life or independently? A number of jurisdictional questions are involved here. Secondly what is the precise meaning of the word *activities* used in this article: all activities involving the sea-bed or only activities related to resource exploration and exploitation?

11. *Ibidem*, Article 19 (1). It is noted that the power of the Authority is subject to the qualification "particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin or the State of historical and archaelogical origin." It may be doubted, whether, in practice, the Authority will be in a position to exercise its powers in many cases.

12. *Ibidem*, Article 19 (2).

13. *Ibidem*, Article 16 (2) (i).

14. UN document A/CONF 62/ WP 8/ Part III (Preservation and Protection of the Marine Environment), Article 24.

15. UN document A/CONF 62/ WP 8/ Part I, Article 12. The formulations in the two parts of the Single Negotiating Text are not easily reconcilable: the article in Part I does not state the entity or entities which must

take the "appropriate measures" and mentions a number of activities not connected with seabed exploration and exploitation, while the article in Part III mentions specifically the Authority but confines its functions to acting in cooperation with States in the limited field of seabed exploration (does exploration include scientific research?) and exploitation. At the same time, Part I, Annex I, article 12 (17) states that in adopting rules and regulations for the protection of the marine environment, the Authority shall take into account "the extent to which activities in the Area such as drilling, dredging, coring and excavation as well as disposal, dumping and discharge...of sediment or wastes and other matter will have a harmful effect on the marine environment;" but in Part III, Article 19 the regulation of dumping is considered a subject exclusively within the competence of States. In conclusion all that can be derived with certainty from the conflicting provisions of the Single Negotiating Text is that the Authority is expected to exercise some regulatory powers for the protection of the marine environment, probably limited to resource oriented activities directly affecting the seabed beyond national jurisdiction.

16. UN document A/CONF 62/ WP 8/ Part III (Protection and Preservation of the Marine Environment), Article 41 (2).

17. There is another ambiguity in Part I, Article 12 (b) which reads: appropriate measures shall be taken for the adoption and implementation of international rules, standards and procedures for...(b) the protection and conservation of the natural resources of the Area *and the prevention of damage to the flora and fauna of the marine environment.*" Not only is the entity empowered to take the measures mentioned unclear, but the paragraph would appear to extend the scope of the seabed convention proposed in Part I to protection of the flora and fauna of ocean space.

18. UN document A/CONF 62/ WP 8/ Part I, Article 24 (1).

19. *Ibidem*, Article 25.

20. *Ibidem*, Article 26. A number of powers and functions are specifically reserved to the Assembly. Ibidem, Article 26 (2).

21. *Ibidem*, Article 28. The powers of the Council include the approval and supervision of the activities of the Enterprise; the approval of contracts and the exercise of "direct and effective" supervision over activities in the Area; protection of human life; protection of the marine environment, etc.

22. It should be noted that the Single Negotiating Text does not propose that there should be *equal* representation from each geographical region; indeed this would be impossible because 24 is not equally divisible by 5.

23. *Ibidem*, Article 27 (1) - (6).

24. *Ibidem*, Article 27 (7).

25. *Ibidem*, Article 29 (1).

26. Not, therefore, by the more usual majority of two-thirds of the Members present and voting. Absence of any specific quorum requirements should also be noted. See *ibid.*, Article 29.

27. For details, see *ibid.*, Article 30.

28. For details see *ibid.*, Article 31.

29. For details, see *ibid.*, Article 32 (1). See also *ibidem*, Article 33 and Article 57-63.

30. *Ibidem*, Article 59.

31. *Ibidem*, Article 32 (2)-(10). On the other hand, the Law of the Sea Tribunal proposed in Part IV of the Single Negotiating Text (document A/CONF 62/ WP 9), is composedof 15 members with recognized competence in law of the sea matters; they are elected at a special meeting of the Contracting Parties (not by the assembly of the Authority), all elected for nine (not five) years and a member of the Tribunal may be removed on the unanimous opinion of his colleagues without reference either to the Council or the Assembly of the Authority. See document A/CONF 62/ WP 9, Annex 1C.

32. The word "activities", here presumably refers specifically to activities relating to the exploration or exploitation of mineral resources.

33. UN document A/CONF 62/ WP 8/ Part I, Article 35. The Statute of the Enterprise is not annexed to the single negotiating text, hence it is not yet known how it is proposed that this organ of the Authority will function.

34. Compare UN Charter, Articles 97-101 with Single Negotiating Text, Part I, Articles 36-41.

35. *Ibidem*, Article 39.

36. UN document A/CONF 62/ WP 8/ Part I, Article 40.

37. This Fund is established by the Assembly.

38. Expenses include: administrative expense; other expenses incurred by the Authority in the exercise of its functions and the expenditure of the Enterprise. *Ibidem*, Article 44 (1).

39. *Ibidem*, Article 44 (2).

40. *Ibidem*, Article 45.

41. *Ibidem*, Article 43.

42. *Ibidem*, Article 46. This is an interesting provision.

43. For details, see *ibidem*, Articles 48-56.

44. It is noted that while the International Seabed Authority is recognized "full international legal personality," the Enterprise is recognized only "international legal personality". The implications of the difference in terminology are unclear.

45. It is interesting to observe (Article 54) that parties to proceedings before the Tribunal, agents, counsel, advocates, witnesses or experts from, and their stay at, the place where the legal proceedings are held are expressly granted comprehensive immunities, including immunity from immigration restrictions in connection with their travel. This article may have been prompted, in part, by difficulties occasionally experienced in the past by persons wishing (or called) to appear before some United Nations Committees at United Nations Headquarters.

46. The text reads "*this Convention*": it is not entirely clear whether the reference is to the "Convention on the sea-bed and ocean floor and the sub-soil thereof beyond the limits of national jurisdiction" which constitutes Part I of the Single Negotiating Text or to the three substantive parts of the Single Negotiating Text which may be intended to be three parts of a general convention on the law of the sea. In view of the contents of Part IV of the Negotiating Text, the intention here is probably to refer only to the proposed Convention on the international sea-bed area.

47. The means specifically suggested are consultation, negotiation and conciliation.

48. UN document A/CONF 62/ WP 8/ Part I, Article 57. For details of procedures see *ibidem*, Articles 58-62. It should be noted that parties to a dispute before the Tribunal may be not only States and the Authority but also the Enterprise and nationals of States Parties to the Convention. The Single Negotiating Text (Article 57) expressly provides for disputes "between a State Party and a national of another State Party or between nationals of different States Parties or between....a national of a State Party and the Authority or Enterpise." It is also interesting to note that "any State Party" may bring before the Tribunal any action taken by the Council, any organ of the Council or the Assembly on grounds of violation of the Convention, lack of jurisdiction, infringement of a fundamental rule of procedure or misuse of power. "If the Tribunal considers the complaint well-founded, it shall declare the decision concerned to be void and shall determine what measures shall be taken to redress any damage caused." (Article 58.)

49. *Ibidem*, Article 63. See, however, UN document A/CONF 62/ WP 9, Annex 1B (Part IV of the single negotiating text). It is not clear whether two different types of arbitral tribunals are envisaged: one for matters relating to Part I of the Single Negotiating Text, and the other for all other questions relating to the law of the sea.

50. *Ibidem*, Article 64 and 65. Any State may propose amendments: amendments come into force when approved by the Assembly by a two-thirds majority of those present and voting and when accepted by two-thirds of all the States Parties in accordance with their respective constitutional processes.

51. *Ibidem*, Article 66. Again it is not clear whether the words "the Convention" refer only to Part I or to Parts II, III and IV of the single negotiating text.

52. *Ibidem*, Articles 67 and 68. The text of Article 68 should be compared to that of Article 6 of the United Nations Charter: there are both similarities and differences.

53. *Ibidem*, Article 73.

54. These words are important: the Authority maintains title not merely to the raw manganese nodules but also to the refined metals.

55. UN document A/CONF 62/ WP 8/ Part I, Annex I, Part A, paragraphs 1 and 2.

56. *Ibidem*, paragraph 3. Exploitation may be conducted directly by the Authority, through States "or State Enterprises or persons natural or juridical which possess the nationality of such States...*when sponsored by a State Party*...." This last clause, which is omitted in Article 22 (2) of Part I of the negotiating text, implies that the Authority must deal only with companies or individuals sponsored by States.

57. It is not clear whether this provision would prevent the Enterprise from dealing directly with private companies.

58. *Ibidem*, paragraph 4. The Enterprise may, however, sell at lower prices to developing countries.

59. All applicants must be either States Parties, State Enterprises or persons, natural or juridical, sponsored by State Parties. Specific qualifications of applicants mentioned in the text relate to financial standing, technological capability and past performance and work experience. *Ibidem*, paragraph 7.

60. *Ibidem*, paragraphs 5 and 6.

61. *Ibidem*, paragraph 8.

62. It is not clear why the *Enterprise*, and not the Authority, is mentioned in the text, since the Council "approves on behalf of the Authority contracts for the conduct of activities in the Area and exercises direct and effective control over the activities in the Area." UN document A/CONF 62/ WP 8/ Part I, Article 28 (x).

63. See *ibidem*, paragraph 3 (a).

64. These are important provisions designed to reduce the possibility that a few technologically advanced countries might obtain an undue proportion of contracts from the Authority.

65. The same paragraph also deals with the calculation of costs in the performance of a Contract. For details see *Ibidem*, paragraph 9.

66. See in this connection also: single negotiating text, Part I, Article 39.

67. This provision appears in contradiction with the comprehensive obligation of the Authority contained in the single negotiating text, Part III (Development and Transfer of Technology), Article 9 (b).

68. *Ibidem*, Paragraph 11.

69. For details, see Annex I, paragraph 12 (1) - (16).

70. For details, see *Ibidem*, Paragraph 12 (17) - (21).

71. *Ibidem*, paragraph 13.

72. This paragraph has not been drafted.

73. *Ibidem*, Paragraph 17; transfer of rights is permitted only with the consent of the Authority.

74. *Ibidem*, paragraph 18. "The law applicable to the contract shall be solely the provisions of this convention, the rules and regulations prescribed by the Authority and the terms and conditions of the contract."

75. *Ibidem*, paragraph 20. All disputes are subject to the procedure for dispute settlement provided for in the Convention.

76. *Ibidem*, paragraph 21. In the period immediately following provisional application of the Convention (see single negotiating text, Part I, Article 73), "the Authority shall for the first (unspecified) such contracts ...give priority to those covering integrated stages of operations."

77. U.N. document A/CONF 62/ WP 8/ Part II, Article 118.

78. See in this connexion, document A/CONF 62/WP 8/ Part I, Article 2. The international Authority is required to register, without objection, all notifications received from States with regard to the limits of their national jurisdiction.

79. The nodule site for which a licence has been requested by Deep Sea Ventures and most other nodule sites which have been prospected are well beyond present national jurisdiction. Some of these sites are not likely to be the object of national claims in the foreseeable future. It is also true that companies would be reluctant to abandon a site which has been explored at substantial expense in order to start exploring areas potentially within national jurisdiction for exploitable deposits. These considerations, however, apply only to a limited number of sites which have been surveyed and do not affect to any great extent the argument in the text.

80. Manganese, however, may be discarded: precise effect on prices will depend on the quantity of manganese produced and on its form (manganese metal or ferromanganese).

81. The price of nickel is likely to be affected more than the price of copper. Prices of molybdenum could also be affected. The question of the effect of manganese nodule mining on market prices is controversial. The validity of the conclusions reached by the United Nations, UNCTAD and private experts depends on the

validity of the assumptions made. The observations in the text are valid, whatever the conclusions reached on the general effects of manganese nodule mining on market prices of minerals.

82. Estimates of possible Seabed Authority revenues vary according to assumptions on volume of production and rate of royalties. The United Nations has estimated that the revenues of the international Authority could range from a minimum of $ 46 million per annum to a maximum of $ 118 million per annum (on an assumed production of three million tons of nodules per year).

83. U.N. document A/CONF 62/WP 8/ Part I, Article 9 (d).

84. Indeed this is not contemplated. In Basic Conditions of general survey exploration and exploitation, Part c, Article 10 (a) reads: "Except as otherwise agreed with the Authority, the contractor shall not be obliged to disclose proprietary design data."

85. Apart, of course, from preparing exports on which the Authority can take little practical action.

86. The provisions entained in Article 22(1) and (2) are inappropriate at least with regard to scientific research and possible future recreational uses of the area.

87. U.N. document A/CONF 62/WP 8/ Part I, Article 28 (xii). Article 31 (2) (iii) states that the Technical Commission shall "make recommendations to the Council with regard to the carrying out of the Authority's functions with respect to scientific research and transfer of technology", but the Single Negotiating Text does not empower either the Assembly or the Council to deal with these subjects!

88. U.N. document A/CONF 62/WP 8/ Part I, Annex I, paragraph 3 (6).

89. There are a large number of questions which should be clarified in that part of the Single Negotiating Text which deals with the Authority: among these, are the relationship, if any, of the Authority with the United Nations system and the powers of the Authority with regard to uses of the sea-bed which are included among the freedoms of the high seas, such as the laying of submarine pipelines and cables. Finally it is not clear whether the Authority has, potentially, functions with regard to installations of a military or potentially military nature on the sea-bed.

Section II

INSTITUTIONAL REQUIREMENTS OF THE INTERNATIONAL MANAGEMENT OF FISHERIES

General Comments

Part II of the Single Negotiating Text makes repeated reference to the need for international management measures both with regard to the conservation of the living resources within the economic zone and with regard to the High Seas. Since very few species complete their life cycle within the economic zone of any one State (and even where they do, the species, animal or plant, lower on the food chain, on which they depend, may not) and since pollution moves across national boundaries, no management system for national ocean space can be effective if it is not complemented by, and integrated with, an international system. This is recognized in Article 50 (2) and (5); Article 52 (1) and (2); and Article 53 (2) and (3) of Part II of the Negotiating Text. Articles 103-107, furthermore, lay down certain principles for the management and conservation of the living resources of the High Seas. "Appropriate subregional and regional organizations" are postulated in Article 105, but neither their required functions nor their competences nor their structure are in any way described. The present Section offers some suggestions as to how this lacuna could be filled.

Present Arrangements for Management of Fisheries

Although the 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas contains a definition of "conservation" and admonitions to States Parties to take appropriate conservation measures, such management as there now is of fisheries in international waters and of resources which inhabit waters under more than one jurisdiction is done under the auspices of regional and specialized fishery bodies. These have increased in number and scope since 1946 until they now appear to cover practically the entire ocean. This full coverage is, however, illusory if one is concerned with function. The range of scope and competence of the fishery bodies is extremely wide. In the North Atlantic two regional commissions (ICNAF and NEAFC) have comprehensive responsibility for practically all resources in their respective areas, and

count as members practically all the coastal nations and they are supported by strong research efforts, and are engaged in both over-all regulation of fishing and the allocation of shares of the fish yields among participants. In the North and Central Pacific, on the other hand, research and management are fractured, bodies have limited competence as to species responsibility and limited membership; there is no regional scientific advisory body with the prestige and effectiveness of ICES, for example. Elsewhere, e.g., off the West Coast of Africa, the characteristics of the existing bodies are that their members are a mix of coastal, developing countries and powerful Northern Hemisphere countries whose ships have, in recent years, come down to fish in the area. The wide variety of situations and arrangements has been well documented elsewhere and needs no repetition here. Our main concerns are the scope of competence, the orientation of the policies of these bodies, and their links with the global international system, that is, with the UN family.

As to scope, the fact that some bodies are species-oriented and others are regionally comprehensive, creates a problem of overlapping competence. Thus tunas in the North Atlantic are within the purview of the International Commission for the Conservation of Atlantic Tunas (ICCAT) and of ICNAF, and NEAFC as well as ICES. In practice arrangements can be made relatively easily for a "leading role" to be taken by one organization, and the work reasonably coordinated. This is, however, only feasible so long as the various stocks of fish are considered to be more or less independent of each other. But as the exploitation of living marine resources becomes more intense and also diversified, independence becomes a less viable assumption; increasingly man continues to exploit a "traditional" stock while beginning to catch the organisms which form its diet or are competitors with it or otherwise ecologically related. The mix of "species and area" bodies (especially those latter having limited authority) will not be able to cope with the new ecological problems arising from intensive use.

A "species" coverage can cover large gaps in over-all responsibility. The outstanding example is the Antarctic ocean. We have become accustomed to think of whales as the only important living resource exploitable in that area, and they are the responsibility, for better or for worse, of the International Whaling Commission (IWC). Now, however, the interest of Northern Hemisphere nations is turning seriously also to the shrimp-like "krill" (main food of some whales) and the Antarctic fish which are far from negligible in abundance. Management of these cannot be achieved solely through the creation of an "Antarctic ocean fisheries commission" if that has no interest also in whales, since the definition of a rational and equitable exploitation policy necessarily must take into account all the resource stocks and the biological interactions between them.

The policies of the fishery commissions were based originally on the assumption that management is the responsibility of those nations which exploit the resources -- or rather of the nations whose flags are flown by the fishing vessels. In regional bodies recently established under the auspices of FAO -- since 1958 -- the interest of the coastal States is, of course, recognized, irrespective of the level of their fishing activities. Nowhere, however, is the interest of the world community explicitly recognized, even for resources far offshore. The over-exploitation of whales by a few nations gives, again, a dramatic example.

It can be, and indeed has been, maintained with economic arguments to back it, that if those nations deplete such a resource, they will suffer the consequences in loss of profits, food products and employment. By their actions, however, they have denied to the rest of the world the possibility of securing some part of a very large protein source for the half century it will take for the Southern Hemisphere whale stocks to recover. Further, if the "krill" is exploited intensively -- by some nations -- in the next ten years, as now seems very likely, the whale stocks will recover even more slowly, if at all. Thus, agreements through treaty organizations to limit catches, and to share them among present participants, while being immensely better than a cut-throat free-for-all, do not ensure either that the resources are maintained in such a state that they can be harvested on a continuing basis, or that the yields are shared equitably as between either present peoples or between the present generation and ist descendants.

As to the relations of the fisheries bodies with the United Nations system, there has been no progress, even regression,in the past three decades. Some new bodies were established soon after the end of the Second World War with provision in their Convention that they might seek association with, even integration in, the emerging UN system; in no case did they elect to do so. The majority of regional and specialized fishery bodies were created outside the system and stayed there. Notwithstanding constitutional impediments noted above, a number of bodies were, however, established under the aegis of FAO, under a number of different constitutional provisions. These FAO bodies, covering the Mediterranean, Central Eastern Atlantic, S. W. Atlantic, Indo-Pacific, Indian Ocean, nnd most recently, the Caribbean, all contain a majority of developing countries as members. Most derive their funds entirely from the completely inadequate FAO regular budget and are correspondingly crippled, although some -- notably the Indian Ocean Fisheries Commission (IOFC) -- have been able in recent years to secure support through UNDP projects. Although all fishery bodies work through the voluntary action of each member State following collective decisions, the force of these decisions varies greatly among the bodies, and those established under FAO are generally weaker than the others; none have yet taken firm management decisions, although in some cases tentative steps are now being

taken in that direction (e.g., by the General Fisheries Council for the Mediterranean, GFCM, a quarter century after its establishment).

Future Arrangements for the Management of Living Resources

It seems evident that any decisions taken by the U.N. Conference on the Law of the Sea regarding the resources living within Exclusive Economic Zones will greatly affect the existing fisheries bodies most of which are concerned, at present, overwhelmingly with the exploitation of resources within 200 miles off one coast or another. The need for regional arrangements will remain because few of the resources live wholly within one national economic zone. Without agreement among the fishing nations, whether they are groups of adjacent countries, or including others, national management is inconceivable in most cases.

In some cases adjustment to the new situation might be relatively painless -- in the North Atlantic, for example. elsewhere, either because of the direct interaction between developing coastal and other maritime States, or because of treaty inadequacies as in the North Pacific, an entirely new system may have to be created.[1] At the same time, with fishing intensity still increasing, and the natural limits of the resource base becoming more evident, it is becoming difficult to regulate fishing in one region without having significant repercussions elsewhere. Regulation of tuna fisheries in the Pacific can cause vessels to move into the Atlantic; closure of some exclusive economic zones to foreign vessels will certainly lead to the deployment of those vessels elsewhere. It seems therefore that this period of adjustment is one during which a new global view of the future of the sea fisheries can be taken.

There have been suggestions that a new world fishery organization should be established, and even that such a body need not absorb the Department of Fisheries of FAO and its COFI, but could act in a complementary manner.[2] It seems desirable at the present time, however, on the one hand not to encourage the multiplication of partially competent organizations, nor, on the other hand, to substitute a new body for the FAO-based structures, provided that the latter can be adapted to present and future needs. The body which was established to take a global view, but which has hardly yet been able to do so, is COFI. To fulfil its role in the new situation considerable change is required. Such change might be modelled on the IOC which, while remaining administratively in UNESCO, has far more operational independence, enhanced by the growth of separate financial resources in its Trust Fund.[3] Thus COFI should be able to accept membership by States not members of FAO; membership should not be subject to approval by executive organs of FAO; COFI should have a clearly identified and ade-

quate secretariat; it should serve the other Agencies of the UN system as IOC serves others than UNESCO; it should be served, in turn, as is IOC, by an advisory system including but not confined to the ACMRR.[4] COFI should be enabled to accept and expend funds in addition to those provided by the FAO regular budget.[5] An additional feature of the style of operation of the IOC is the growing role of the elected officers -- the Chairman and the six vice-chairmen. These officers working closely with the joint secretariat contribute very much to both the formulation and implementation of the IOC program. They are unpaid (although some remuneration has been suggested) but they devote considerable time to their duties, and also each takes on specific areas of responsibility. A corresponding evolution of COFI could contribute to its status and effectiveness.

Changes on the above lines would put COFI into a position of more authority with respect, on the one hand, to the regulatory fishery bodies and, on the other hand, to the other special organs of the world system concerned with the oceans -- IMCO, IOC, and the proposed International Seabed Authority. At the time of establishment of COFI it was stressed by FAO that its purpose was "to supplement but not to supplant" the existing international fisheries bodies. The intent was that it should not be suspected of having been given a coordinating role. Such a role must however now be taken, and COFI can be the appropriate body for this purpose. A failing of the 1958 Geneva Conventions was that no organ was assigned continuing responsibility for keeping under review the implementation of the provisions they contain with regard to fisheries. COFI should be required to fulfil that function with regard to the provisions laid down by UNCLoS, and as IMCO already does, through convening review conferences relating to the various conventions for which it is responsible. Specific mechanisms need to be created to ensure that the business of regional fishery bodies is conducted in accordance with general guidelines and principles established by global authority, including particularly the principles of the New International Economic Order. One such mechanism might be a Council of designated governmental representatives of the fishery bodies, or their elected officers, under the auspices of COFI and reporting to it. An important function of COFI would then be to examine the actions taken by the fishery bodies and evaluate the likely consequences of them with respect to the principles of the New International Economic Order. COFI should be given a special responsibility for overseeing the development and conservation of fisheries in the areas beyond national jurisdiction, and the actions within national jurisdictions which may affect the open ocean resources. This may imply, on the one hand, the adoption of a system of non-discriminatory licensing of commercial fishing in international ocean space;[6] on the other hand, and as a longer-term proposition, one might conceive of an International Fishing Enterprise, established on the pattern of the nodule mining enterprise proposed in Part I of the Single Negotiating Text. Such a public International

Fishing Enterprise might be the only -- and at any rate, the quickest -- way to include developing nations in the management and exploitation of the living (especially nonconventional) resources in the international area[7] -- especially in the Antarctic Ocean -- from which they would remain excluded due to the lack of technology. In addition, COFI should be given authority, directly or through the establishment of a new body permanently associated with it, to regulate the development of industries based on living marine resources south of the Antarctic convergence, including the marine mammals (whales and seals) in that region. It might be empowered to delegate in certain cases such authority to other existing bodies, such as the IWC, and the group of Antarctic Treaty nations, but ultimate responsibility should stay with the world community as represented through a strengthened expanded COFI.

In accordance with Part IV of the Single Negotiating Text[8] COFI should establish machinery for the settlement of disputes related to fisheries. This would include keeping a list of legal, administrative and scientific experts from which parties to a dispute could, for any given case, select a special committee of five members. The Secretary or Director General of COFI should be empowered to make the selection if the parties fail to come to an agreement. The committee should have power to prescribe such provisional measures as it considers appropriate to be taken to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending its final decision. These measures should be binding on the parties. The special procedures for the settlement of fishery-related disputes, as proposed in Part IV of the Single Negotiating Text and incorporated in the new Statutes for COFI, would cover disputes between States Parties to the Convention, regional commissions (which presently lack dispute settlement machinery), enterprises, and COFI -- in any combination.

If, in addition, COFI were the recipient of trust funds from national and international sources as well as of an income from license fees and, eventually, from the direct management of an international fishing enterprise, its fulfilment of these new functions would be facilitated directly through selective financial support of the regional and specialized fishery bodies, especially those which have developing countries as members.

Principles of International Fisheries Management

It is generally agreed that the annual catch of fish of traditional kinds is within sight of the limit of what these natural resources can sustain. Several stocks are already seriously overfished, some can sustain higher catches with in-

creasing intensity of exploitation, but the total, even under proper management, will not exceed double the present level. Features of the present situation are (1) that the total level of investment in fishing vessels and equipment already exceeds what would be needed to take the maximum catch; and (2) an increasing proportion of the catch, even by developing countries, is used in livestock feeds which are moved, almost entirely, to increase food supplies in the already well-fed countries. Two desirable changes are therefore avoidance of waste of other natural resources such as fuels and materials consumed in excessive fishing of some stocks, and measures to encourage increased consumption of their own catches by developing countries, preferably directly. In addition, however, there is known to be a very large potential for nonconventional marine organisms as food, in the Antarctic and elsewhere. It is essential to ensure that these resources are developed in such a way as to tend to equalize protein consumption patterns rather than further to enhance existing differences and, further, that they be used with restraint so that future generations are ensured their full benefits from them, if they so wish.

In the context of the New International Economic Order, equity in the distribution of benefits in time is at least as important as equity in distribution of current benefits. The principles of conservation, as defined in the 1958 Geneva Conventions, and largely reiterated in Part II of the Single Negotiating Text, are inadequate as a basis for present and future requirements; and although COFI, as modified, should be a suitable instrument to promote equity in current distribution, special arrangements may be needed to fulfil the longer-term requirements. An independent office, linked with the scientific advisory system, should be charged, and given the means, to assess the consequences of all planned activities which will affect the living marine resources and their environment, with respect to future options and potential benefits, and generally to represent the interests of future generations of mankind. Reference of management plans to this "ombudsman" should be mandatory.

Summary

An efficient system for the management of living resources in international ocean space, capable of assisting coastal nations in the management of their national resources if they so desire, and of regulating the interaction between national and international management systems, would require the following steps:

1. Reduction of Fisheries Commissions to one per region [to be defined] with comprehensive [not species-oriented] competences, except for a global International Tuna Commission and a global International Commission for Marine Mammals [enlarged IWC].

2. Linkage of these Commissions to a restructured COFI through

   (a) a Council composed of representatives of each Commission;

   (b) a dispute settlement machinery in accordance with Part IV of the Single Negotiating Text;

3. Restructuring and strengthening of COFI through

   (a) universalization of membership;

   (b) establishment of a system of licensing for fishing in the international area;

   (c) establishment of an independent Secretariat;

   (d) establishment of an international Enterprise for the management of living resources;

   (e) establishment of independent international fisheries research capacity, to be incorporated in IOC;

   (f) establishment of dispute settlement machinery in accordance with Part IV of the Single Negotiating Text;

   (g) independent financing (from a trust fund, income from licenses and the Enterprise).

Footnotes

1. If properly coordinated by a global organization such as COFI, almost all fisheries commissions could function more effectively on a *regional* rather than on a *species-oriented* basis. This will avoid overlaps of competences, duplication of efforts, and cut down on the number of commissions. There are two, however, which can only function on a species-oriented and global basis, and that is an international tuna commission and an international whaling commission. The competence of this latter should be broadened, making it into an International Commission for Marine Mammals.

2. See, e.g., A.W. Koers, "International Regulation of Marine Fisheries," 1973.

3. It may be premature to discuss the possibility of severing IOC from UNESCO and COFI from FAO. But once it has been decided that a system of ocean space institutions should be established, it would be more logical for COFI and IOC to become an integral part of that system while maintaining cooperation and consultation with FAO and UNESCO respectively than to remain within the restrictive framework of these organizations while maintaining a cooperative and consultative relationship with the other ocean space institutions (the International Seabed Authority and IMCO).

4. No fisheries management system can function without independent scientfic research capacity. The question may be raised whether a restructured COFI, coordinating a system of regional and functional management systems, should have its own scientific arm, or whether the scientific capacity should be lodged in a restructured IOC. Considering the interdependence of fisheries research with other branches of oceanographic and meteorological research, the latter alternative seems preferable and will be discussed in Part II, Section 4.

5. Additional funds might accrue to COFI from *license fees* as well as from the revenues of an *Enterprise*.

6. Such a system has been proposed, e.g., by Francis Christy. See, for details, UN Document A/AC 138/53, Articles 138-140.

7. This should deal not only with marine animals but also with marine plants. The large-scale farming of kelp and other marine plants, not only in areas near the coast, but in international ocean space, is rapidly becoming a practical possibility. The potential benefits, in energy resources, food, petrochemicals, and pharmaceutical products, is enormous. See Appendix. Technologies for the large-scale farming of marine plants are now being developed by the industrialized nations. Their application and R&D should be taken over as quickly as possible by the international community through the appropriate

ocean institutions. Where this kind of ocean farming will be undertaken within the economic zone, it will nevertheless affect international ocean space (e.g., by attracting fish or changing their route of migration; by affecting the weather or changing the flora and fauna in the region). Where it takes place in international ocean space, legal and economic issues, analogous to those raised by seabed mining, are bound to arise. See also UN Document A/AC 138/53, Article 141.

8. Part IV of the Single Negotiating Text assigns this new function to FAO as a whole rather than to COFI which, in its present form, would not have the necessary authority. Since it is COFI, however, and not FAO as a whole, that deals with fisheries, the function should be assigned to a strengthened and restructured COFI, not to FAO as a whole, which deals with other aspects of food and agriculture, not related to the oceans. If FAO as a whole were to assume the function of dispute settlement with regard to marine affairs, why should not UNEP do the same with regard to pollution of the marine environment? Part IV of the Single Negotiating Text assigns this function to IMCO, with the implication that the function of dispute settlement in marine affairs should be assumed by institutions the activities of which are exclusively ocean-oriented. There seems to be an inconsistency in excluding UNEP -- presumably because a large part of its activities is unrelated to the oceans -- and including FAO which should be excluded on the same grounds. For alternative suggestions, see Part IV of this study.

Section III.

THE INSTITUTIONAL REQUIREMENTS OF INTERNATIONAL NAVIGATION

The Ongoing Evolution of IMCO

Among the intergovernmental organizations concerned with ocean space, the Inter-Governmental Consultative Organization (IMCO) is in a way the one closest to being ready to take its place as a "basic organization" in a "functional confederationof international organizations." For IMCO is a specialized agency and as such an independent intergovernmental organization already in close relationship with maritime and environmental bodies of all kinds, intergovernmental and nongovernmental. It has its own membership, constitutional structure and budget, and its purposes are:

(a) to provide machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety and efficiency of navigation;

(b) to encourage the removal of discriminatory action and unnecessary restrictions by Governments affecting shipping engaged in international trade so as to promote the availability of shipping services to the commerce of the world without discrimination;

(c) to provide for the consideration by the Organization of matters concerning unfair restrictive practices by shipping concerns...;

(d) to provide for the consideration by the Organization of any matters concerning shipping that may be referred to it by any organ or specialized agency of the United Nations;

(e) to provide for the exchanee of information among Governments on matters under consideration by the Organization.

The Treaty which created IMCO was concluded on March 6, 1948, but did not enter into force for a decade afterwards, in part because of hesitations by some maritime countries about purposes (b) and (c) above. The Organization did not in fact exist until 1959 when its head-

quarters were established in London.

IMCO consists of an Assembly of all the Member States (including one Associate Member, Hong Kong), a Council of eighteen Member Stttes, a number of functional Committees and Sub-Committees and a Secretariat of under two hundred international civil servants.

At the beginning, the Council of IMCO was composed of sixteen Members all of which had either large or substantial interest in shipping or seaborne trade and only some of which were elected by the Assembly. The first functional Committee of IMCO was hhe Maritime Safety Committee and this, too, was composed of States with important interests in shipping, sixteen in number and elected for four years with eligibility for re-election.

The expansion of the United Nations membership and the growing interest of developing countries led in the mid-1960s to amendments of the IMCO Convention to expand to eighteen States the membership of the Council and sixteen for the Maritime Safety Committee.

These amendments not only increased the membership but provided that all Council Members would be elected by the Assembly and introduced the principle of equitable geographic representation in both Council and Maritime Safety Committee.

The amended Convention is still in force, but in 1974 a further expansion took place when the Assembly of IMCO "recognizing the need to ensure at all times that the principle organs of the Organization are representative of the total membership of the Organization and ensure equitable geographic representation of Member States on the Council" adopted a new series of amendments (expected to enter into force in the near future) expanding the membership of the IMCO Council to twenty-four and opening the Maritime Safety Committee to all Members of IMCO.

IMCO has thus been going through a process of enlargement of its membership and democratization of its structures. A widening of its scope of operations has accompanied these developments, and new Committees have been created as described below.

In part, this process reflects the enormous expansion in the uses and users of ocean space since the early years after World War II, when the idea of a new international maritime consultative organization arose from the activities of Governments.

In those days, the nations which dominated international shipping and sea-borne trade naturally saw a need, and had the power, to dominate any new body which considered such matters

as "discriminatory action and unnecessary restrictions by Governments affecting shipping" or "matters concerning unfair restrictive practices by shipping concerns." They were able effectively to keep such matters out of consideration. They achieved their purpose so well that matters of a commercial or economic nature, which could and should have been dealt with under the IMCO constitutive treaty, were in fact not dealt with. They had to be taken up in other places, such as UNCTAD, where the maritime States have not had a predominating influence.

IMCO has made its mark in the area of international technical and legal legislation where expertise is all-important but where economic considerations still have their place. The importance of maritime safety -- not the least for the preservation of the marine environment -- is so great that the work of the Maritime Safety Committee was really the main part of the Organization's work for a decade. Aids to navigation including radio and satellite communication; the construction and equipment of vessels; the handling of dangerous cargoes; safety procedures and requirements for mariners, including the International Regulations for Preventing Collisions at Sea; life-saving appliances; standards of training and watchkeeping; containerization; fire protection; load lines; search and rescue -- these and many other matters directly involving maritime safety and efficiency of navigation have formed the ongoing consultative work of IMCO. From 1954 onward (and therefore five years before the Organization was actually in being) it was foreseen that IMCO would also be responsible as the "bureau" for the International Convention for Prevention of Pollution of the Sea by Oil. This treaty, in force since 1958 and amended in 1962, covers between 90 and 95 percent of the world's deep-sea shipping and tanker fleet.

It was this interest in pollution prevention and control and in maritime safety in general that led to the calling of an extraordinary session (the third) of the IMCO Council on May 5, 1967, to consider what the Organization could do on the intergovernmental level to deal with massive marine pollution resulting from ships' casualties. The representatives on the Council, with the *Torrey Canyon* incident fresh on their minds, adopted an 18-point program which included matters not theretofore considered collectively by IMCO, namely legal questions arising, first, from "intervention" for self-protective purposes by a State which suffers or is threatened by pollution damage from a ship of a foreign flag, and, second, from the need to compensate victims of large-scale marine pollution by oil.

Two additions have been made to the IMCO structure in consequence of this interest in anti-pollution and related matters. One was the creation by the Council of a *Legal Committee* which first met as an *ad hoc* body in June 1968 and has held nearly

thirty sessions since. The second was the establishment of the *Marine Environment Protection Committee* by decision of the Council confirmed by the eighth session of the IMCO Assembly in November 1973. The first session of the MEPC met on March 4, 1974.

Both new Committees consist of all Members, each Member having one vote, and without discrimination among powerful maritime States and others.

The Legal Committee has launched a growing number of projects ranging from pollution and nuclear matters to wreck removal and liabilities for ships' passengers and their luggage. The MEPC has undertaken a heavy program concerned with such matters as provision of reception facilities in ports for pollutants, procedures for the discharge of noxious liquid substances, performance standards for oily water separators and oil content meters, development of standards and test methods for sewage treatment plants, a comprehensive anti-pollution manual for mariners and a comprehensive plan for the protection of the marine environment from pollution from ships.

In addition, the Organization has begun looking into the prickly question of sub-standard ships -- unsafe vessels which ply the seas in spite of the almost universal applicability of the International Convention for the Safety of Life at Sea, of 1960. The pollution treaties and the (now suspended) Load Lines Convention, 1966, also contain standards which are not always enforced by ship-owners and masters as they should be. Both the IMCO study of sub-standard ships and the work of the Legal Committee on legal enforcement of the anti-pollution treaties is expected in due time to help alleviate the problem of maritime law-breaking.

IMCO has an expanding program of technical assistance in the field of marine pollution, and is endeavoring through symposia, technical advice to developing countriss and other means, to sustain and expand international standards of safe navigation and environmental protection.

The enlargement of the structure and of the scope of IMCO's activities necessitated another series of amendments, which were agreed upon by an *ad hoc* Working Group in February, 1975, and will be submitted to the next IMCO Assembly for action. These amendments include a restatement of the Purposes of the Organization, which now include legal matters and the prevention of marine pollution from ships. They also open the door towards a further enlargement of scope and increased cooperation with other organizations.

Thus it is clear that the evolution of IMCO has not come to its end. The expansion of its membership will continue, and

the role of the developing nations will grow. At the time of the first IMCO Assembly in January, 1959, approximately half of the thirty-two Members were developing countries. In the present membership of ninety, the preponderance of these countries is closer to two-thirds. There is likely to be a further democratization of structure: thus the structure of the Council, which still discriminates between nations with strong maritime interests and others, has become somewhat obsolete in an overall structure which has abolished this discrimination in all its other organs. And the enlargement of activities is likely to continue in response to the requirements arising from the new Law of the Sea and the building of a new international economic order in ocean space.

IMCO and the New International Economic Order

The Informal Single Negotiating Text deals with navigation in Part II. Articles 14-23 define and assure innocent passage in the territorial sea and authorize the coastal State to enact laws and regulations with regard to the safety of navigation and the regulation of marine traffic, the protection of navigational aids, facilities and installations, the preservation of the environment and the prevention of pollution; and to tankers and ships carrying nuclear or other inherently dangerous or noxious substances. Articles 24-32 contain rules applicable to merchant ships and government ships transiting the territorial sea. Articles 34-44 deal with passage through straits used for international navigation. The section on the Economic Zone grants freedom of navigation to all ships of all States and has no other reference to navigation. The section on the High Seas grants freedom of navigation (Article 75), deals with the nationality of ships and the question of flags of convenience (Articles 77-80) even though this treatment is inadequate and lacks enforcement measures. Articles 81 and 82 grant immunity to warships and State-owned or -operated ships on the High Seas; Articles 83 and 84 deal with collision. Article 85 has survived from very old times and deals with the transport of slaves in ships; Articles 86-96 deal with the suppression of piracy, traffic in narcotics and unauthorized broadcasting from the High Seas; Article 97 deals with hot pursuit; Article 98, with the preservation of the marine environment; Articles 99-102, with the protection of cables or pipelines from ships. Passage through archipelagic waters is defined in Ariicles 124-130.

Implicit reference to the work of IMCO can be found in Articles 19,39, 42, 47, 80, 125, and 128. Its services -- as of a "competent international organization" -- are invoked only in Ariicles 19 and 40, in connection with the designation of sea lanes and the prescription of traffic separation schemes in territorial waters and in straits. The concept of freedom of

of navigation is still pervasive. The recognition that the nature of modern maritime traffic and the interaction of uses of ocean space is such that there is a need for a management system and that, just as in the case of resource management or the management of science and technology, this system must have a national and an international component is advancing only slowly. As it advances it is likely that IMCO will have to be given new competences to make and execute laws and regulations on navigation, as well as managerial and operational capacity. This will require some adjustments in the Articles of the Single Negotiating Text -- as well as a further enlargement of the Statement of Purposes of IMCO, which will have to include someehing like "the regulation of international navigation in ocean space, in accordance with international law and the laws of coastal States, and with due regard for other uses of ocean space."

If the injunction of the Sixth Special Session of the General Assembly, that *all* U.N. institutions and agencies must contribute to the realization of the Programme of Action for the establishment of the New International Economic Order is to be taken seriously, it will be necessary to reconsider IMCO's established policy of not dealing with the economic and trade aspects of shipping and navigation. The advancement of the shipping capacity of the poorer nations, assuring their fair share in shipping tonnage and international sea-borne trade must be included among the stated purposes of IMCO and be reflected in the Articles of the Law of the Sea.

Implementation must take place on various levels, and IMCO has actually begun to move into some.

Shipping is largely training as far as developing economies are concerned. Ships can be bought, and in many developing countries there is now no shortage of money to buy them. What is lacking is trained personnel, and this training takes about 12 to 15 years. IMCO has a technical assistance program of a magnitude out of all proportion to the size of its Secretariat and basic work program. Marine academies have been established on all continents. The IMCO center in Alexandria, Egypt, has developed into a real university. Fourteen Arab States send people to acquire the whole spectrum of maritime training. There are other centers either in being or well along in planning, in Saudi Arabia, Qatar, Iraq, Ghana, Nigeria, the Ivory Coast, Brazil, Indonesia, Malaysia, the Gilbert ant Ellice Islands, and elsewhere.

IMCO estimates that from 6 to 7 percent of the world's fleet is now held by developing countries. The more optimistic members of the IMCO Secretariat think this percentage can be increased rapidly, and that in less than a generation the developing nations might even take over the world's shipping completely.

Crew training, however, is not the only problem. IMCO has two projects in Korea for shipbuilding and repair. It has a fellowship program for maritime technology. IMCO enjoys the unanimous support of the Member States for all this activity, and it is the Secretary-General's goal that there should not be *any* underdeveloped countries with regard to shipping in about fifteen to twenty years.

There are other obstacles to overcome, however, and other estimates and predictions are less optimistic. A series of UNCTAD reports have documented that the developing countries share of sea-borne trade is very small indeed (the figures coincide with those of IMCO), but, contrary to IMCO's assessment, UNCTAD points out that this share is steadily declining. In "Review of Maritime Transport," 1973 (TD/B/C/.4/114), prepared for the Sixth Session of the Committee on Shipping, April 9, 1974, UNCTAD comes to the following conclusions:

"The relative share of tonnage under the flags of developing countries dropped further in 1973, though only slightly, as compared with 1972. As against 7.3 percent in 1965, the share of tonnage of this group of countries accounted for 6.4 percent in 1971, 6.1 percent in 1972, and 6.0 percent in 1973."

In other words, the industrialized countries are still exercising a virtual monopoly over shipping while sea-borne trade increased from 1,1080 million metric tons in 1960 to 2,861 million in 1972, that is, almost trebled. This, of course, is inherent in the whole structure of the multinational shipping business which, through the so-called liner conferences, tends to be more and more cartellized and -- given the lack of international regulation -- escapes national regulations through flags of convenience of countries of so-called open registry.

This problem has, over the last decade and a half, assumed dimensions which are rather alarming: a threat to the safety of navigation, to the ocean environment, to labor standards and human rights, and to economic equity. (See, in particular, Esko Antola, "The Flag of Convenience System: Freedom of the Seas for Big Capital," in Instant Research on Peace and Violence, Vo. IV, Nr. 4, 1974).

In 1972, one fifth of the world's tonnage was flying flags of convenience, and the figure is still growing. Of the world's tanker tonnage alone, 27.5 percent was flying the Liberian flag in 1973. The owners frequently are the great multinational corporations, including Chevron Shipping (Standard Oil of California), Texaco Inc.,Shell Transport and Trading Co.etc. As is well known, the open-registry countries offer lax construction standards; ships are minimally manned with crews mostly recruited from low-wage areas (Asia and Africa). Equipment and working conditions are often poor. Some of the most clamorous accidents in the last years -- e.g.,

the *torrey canyon*'s -- involved ships and tankers sailing under flags of convenience. According to ILO statistics, the figure for the loss of total tonnage and break-up is considerably higher for flag of convenience ships than the world average. E.g., the loss figures for the Lebanese fleet between 1966 and 1970 was 3.84 percent, and for the Cypriot fleet, 4.42. Break-up records were 20.94 for Lebanon and 12.58 for Cyprus. The world average figures are 0.40 for losses and 1.92 for break-up!

IMCO has made some efforts to cope with the problem of "substandard ships," and conceivably may solve it within the next few years. But safety, of course, is only one aspect of the problem of the flags of convenience. The Law of the Sea Conference is trying to establish some criteria for the conditions of ship registration, but there is no international authority to enforce these criteria, nor even to inquire in how far they are enforced nationally.

There are two ways of dealing with the problem of open registry and flags of convenience: correctively or preventively.

The Maltese Draft Ocean Space Treaty deals with it correctively. Article 8 (7) reads:

"Vessels lying in or traversing International Ocean Space may be subject to proceedings before the International Maritime Court and to penalties if it is found that they

(a) Are registered at the same time in more than one State;

(b) Have the nationality of more than one State or have the nationality of no State or are not entitled to fly the flag of an intergovernmental organization;

(c) Are flying the flag of a State that does not effectively exercise its jurisdiction and control over them in administrative, technical and social matters;

(d) Do not possess documents proving their right to the flag they are flying;

(e) Do not conform to such technical, safety and social standards and regulations as may be prescribed by the International Ocean Space Institutions in accordance with the present Convention..."

As a *preventive* approach, one might envisage an *international licensing system* for ships, as proposed by a group of experts at the University of Wales and presented by Professor Peter Fricke at Pacem in Maribus V (Malta, 1974). Such a licensing system, Fricke said, would in fact provide an "international passport" for merchant vessels which would allow them

to trade in the seas of the world. It would be issued only upon evidence that the ship satisfied pollution regulations, was properly insured, and properly manned and constructed. Fricke suggested that such a licensing system could be "set up as an extension of some form of international authority, possibly IMCO slightly revised and developed."

The license would provide a basis for freedom of navigation. For the license would define a vessel, and the nature of its mission or function, as being "innocent," and thus entitle it to innocent passage (obviously, without abrogating from a coastal State's right to designate sea lanes and prescribe traffic separation schemes and other safety measures).

An effective international licensing system obviously would put the countries of open registry out of business. Ideally, the new law of the sea should combine the preventive and the corrective approach, and the licensing of ships should be entrusted to a strengthened IMCO.

To deal with the progressive cartellization of the shipping business -- to the exclusion of the poorer countries -- UNCTAD has proposed a *Code of Conduct* for Liner Conferences, to insure that the interest of ship-owners and users are kept in balance, and to strengthen the position of small companies and national fleets against the giant cartels, by the general principle that 40 percent of a country's foreign trade should be carried out by national merchant fleets, and only 20 percent should be left to a third party (40-40-20). Whether it is realistic to look for national alternatives to a development that has become probably irretrievably internationalized is an open question. Possibly the only realistic alternative to private internationalization, benefitting rich companies and rich countries, is public internationalization, benefitting the rich and the poor alike. Some way would thus have to be found to bring the Liner Conferences from the private to the public sector, or at least to a mixed private/public sector: either by stipulating that Liner Conference decisions, to be enforceable, have to be approved by the IMCO Assembly; or by making Liner Conferences into "Public International Enterprises" under the political control of the IMCO Assembly. If the New International Economic Order is to become concrete, IMCO, and the Law of the Sea, will have to deal with the multinationals and their cartels in shipping just as the International Seabed Authority will have to deal with the multinationals operating on the seabed.

If the International Seabed Authority can be considered under some aspects as a structural model, one might examine the possibility of giving IMCO an operational analogue to the "Enterprise." This operational arm might be an International Sea Service whose main purposes would be: to assist in the implementation of expanded marine scientific activities of the U.N. system; to assist in pollution monitoring activities; to serve for the transport of relief supplies, the provision of

speedy emergency assistance in cases of natural disaster; and to assist in the training of maritime skills and techniques, especially with regard to the manpower of developing nations (see Pardo, Statement to the Second Committee of the General Assembly, November 24, 1971, in The Common Heritage, Malta, 1975).

The International Sea Service should be managed by IMCO -- as should, in our opinion, the marine sateliite system which, instead, is presently being planned as a separate Corporation INMARSAT, with its own Council and its own Assembly. This might contribute to the further proliferation of international organizations and the dispersion of their activities. It would run counter to the recommendations of the Programme of Action for the Establishment of a New International Economic Order, calling for streamlining and integration. IMCO would be strengthened, and its activities better integrated if INMARSAT, as well as the International Sea Service were "Enterprises" under IMCO's control and management.

Part IV of the Single Negotiating Text suggests a further expansion of IMCO's functions and structure. Annex II B proposes, in Article 1, that any dispute between two or more contracting Parties concerning the application of the articles of the Convention relating to pollution, if not settled by negotiation, shall, at the request of any of the parties to the dispute, be submitted to a special committee of five members, appointed by agreement between the parties and selected from a list of experts on scientific and technical marine pollution problems established by the Inter-Governmental Maritime Consultative Organization. Article 2 establishes that if the parties fail within a period of three months, the members of the special committee shall, at the request of any party to the dispute, be appointed by the Secretary-General of IMCO. Articles 3-5 provide further details regarding the functions of the committee of arbitrators which, according to Article 6, shall give its decision within five months (except in cases of emergency) of having been set up.

As noted elsewhere in this study, it seems surprising that IMCO (rather than UNEP) should deal with disputes arising in connection with pollution from all sources. It might be preferable to limit IMCO's jurisdiction to ship-borne pollution.

On the other hand there exists a proposal for exactly the same kind of arbitration process in UNCTAD's proposed Code of Conduct for Liner Conferences. According to the UNCTAD proposal, the list of experts should be kept by the U.N. Secretariat in Geneva, which should also be responsible for the setting up of the Committee.

It would appear redundant to have two different special procedures for dispute settlement with regard to navigation: one for pollution, established under IMCO, and one for economic issues, established under the U.N. Secretariat in Geneva.

Considering also the possibility of overlaps between environmental and economic issues, it might be more rational to merge the UNCTAD proposal and that of the Single Negotiating Text and establish *one* special procedure for the settlement of any dispute arising from navigation, under IMCO.

This might be an important step to get the proposed Code of Conduct off the ground, and it would strengthen IMCO's role in the building of the New Internatinal Economic Order.

Summary

The process of restructuring and strengthening of IMCO is well on its way. With the amendments of 1974 and 1975, IMCO could well take its place as a "basic organization" in a functional federation of international organizations dealing with the peaceful uses of ocean space and resources.

Additional, long-term changes, apt to strengthen IMCO's contribution to the building of the New International Economic Order, might include:

1. A restructuring of IMCO's Council, omitting discriminatory criteria;

2. An international licensing system for ships, to cope effectively with the problem of the flags of convenience or open registry;

3. Effective control of shipping cartels and liner conferences;

4. Strengthening of the operational aspects of IMCO's services, including control and management of INMARSAT and an International Sea Service;

5. Establishment of a special procedure for dispute settlement in connection with all issuss arising from navigation.

Section IV

INSTITUTIONAL REQUIREMENTS OF INTERNATIONAL SCIENTIFIC RESEARCH, THE TRANSFER OF TECHNOLOGY AND THE PRESERVATION OF THE MARINE ENVIRONMENT

The Ongoing Development of IOC

Realizing the need for coordinated action in the field of marine sciences, UNESCO's General Conference, at its tenth session (Paris, 1958), adopted a resolution which provided for the convening of an intergovernmental conference on oceanographic research. This conference, in the preparation of which the U.N., FAO, WMO and IAEA were closely associated, was held in Copenhagen in July 1960.

The principal recommendation of the Copenhagen Conference was that an Inter-Governmental Oceanographic Commission be set up with the help, and within the framework, of UNESCO, with the task of recommending to Member States concerted action in oceanographic research. At its eleventh session (Paris, 1960), the General Conference of UNESCO adopted this recommendation and established IOC within the framework of UNESCO. In particular, it approved the funds needed and set up an *Office of Oceanography* to assure its Secretariat.

At its founding, IOC had 40 members, all of which were developed States, and a budget of $21,015, out of a total of $183,000 which, that year, constituted the total amount UNESCO was spending on marine sciences.[1]

"UNESCO looks upon your Commission as an instrument which can be of great assistance in solving those problems of oceanography for which...concerted international action is imperative," UNESCO's Acting Director General, René Maheu, said at the opening session of IOC, on October 19, 1961.[2] "However, it should no doubt be said that there are many other problems which need to be examined by scientists, institutions or specialized laboratories, research work in which it is not the Commission's function to direct or to coordinate. Nor, it must be remembered, is it the Commission's duty to carry out meteorological research -- that is a function of WMO -- nor fishery research, which comes within the field of competence of FAO." On the other hand, Maheu pointed out, "it is desirable that in executing its programs, the Commission should cooperate closely with other institutions of the United Nations family, particularly with the United Nations Food and Agriculture Organi-

zation (FAO), the World Meteorological Organization (WMO), the International Atomic Energy Agency (IAEA), and all other competent intergovernmental and nongovernmental organizations, respecting their various fields of competence, but working together with them to arrange meetings and other forms of useful collaboration."

Thus IOC was burdened from the beginning with the ambiguity of its position within and beyond UNESCO and the complexities of relationships with other organizations. Both caused tensions, inducing an evolution *sui generis* which may be reaching a point where the institution must either emancipate itself and become something resembling a "Basic Organization," or regress functionally and return into UNESCO's womb. Both trends are strong, responding to real needs and interests. The coordination of the *International Decade of Ocean Exploration*, with its manifold and ambitious projects, demands a strong organization. So do the needs of the growing number of developing nations among its membership. The great powers, on the other hand, on whose support IOC overwhelmingly depends, wish to maintain their own control over scientific research. A strong international operative scientific organization might not always be subservient to their own interests.

Whether the tasks of the Internatinal Decade will eventually call for IOC to become partly operational, i.e., to own and operate research vessels and ocean monitoring networks, has been discussed on various occasions. As one commentator put it, "First, if the IOC were to take on the function of operating programs itself, national governments might perceive the international management as a threat to their interests. Second, if programs operated were not congruent with the interests of national governments, these governments might well withdraw support. For these reasons the conduct of operations is not thought essential to IOC's capacity to implement Decade tasks."[3] And again: "...the Statutes and Rules of Procedure do not specifically authorize the Commission to conduct operations, establish and enforce norms, or settle dispute. These functions have not been determined essential to IOC's achieving the tasks of the Decade. Should Commission members determine at a later time that any or all of these needs should be performed, they may amend the Statutes according to the amendment procedure."[4]

In 1969, the Statutes of IOC were revised. The Conference of Members was transformed into a regular *Assembly* of Members and Affiliated Organizations. This is the supreme body of the organization. It adopts resolutions on program planning and implementation, establishes norms of conduct, creates guidelines for subsidiary bodies, and provides a forum for deliberations on all matters within the scope of the organization. The Assembly elects its own Chairman.

The Assembly elects the members of the *Executive Council* which, under the revised Statute, replaces the former Bureau and Consultative Council. The Executive Council meets between sessions of the Assembly, directs the work of the Secretariat and the subsidiary bodies. It adopts policy recommendations which, as a rule though not in all cases, are submitted to the Assembly for approval. While the IOC Secretary reports to the Director-General of UNESCO, the IOC Chairman is responsible to the Member States directly, and Member States need not even be members of UNESCO. Any State that is a member of the United Nations or of any of its specialized agencies or subsidiary organizations, may join IOC. All this illustrates the ambivalent position of IOC within and beyond UNESCO.

Through its Assembly and Executive Council, IOC may establish subsidiary bodies for specific projects. It has established well over twenty such bodies during the decade and a half of its existence. Some of these are groups of experts, others are intergovernmental bodies, responsible for the planning and coordination of such projects as the International Indian Ocean Expedition, the International Cooperative Investigation of the Tropical Atlantic, and the Cooperative Studies of the Kuroshio, Caribbean, and Mediterranean.

The mandate to establish formal collaboration with all interested organizations that contribute to the work of IOC and are to use, in return, the Commission for advice and review in marine sciences, led to the establishment of an Inter-Secretariat Committee on Scientific Programmes Relating to Oceanography, ICSPRO, consisting of IOC's Secretary and the Executive Heads (or their representatives) of the U.N., UNESCO, FAO, WMO, and IMCO: an "integrative machinery" within the field of marine sciences. The experience, over the subsequent years, was not encouraging. Integration at the Secretariat level turned out to be rather ineffective, and ICSPRO failed to produce the staff and budgetary developments that had been hoped for.

In the meantime, internal organizational tensions led, in 1972, to the separation between the administration of the Office of Oceanography of UNESCO, and that of the Secretariat of IOC. This was a decisive step in the direction of the emancipation of IOC from UNESCO. The possibility of detaching IOC even geographically and relocating it, e.g., in Geneva, to facilitate its cooperation with other organizations and especially with the U.N. Seabed Committee, was under serious consideration, but was not acted upon.

The number of Member States of IOC had grown to 74 by 1972, including several developing and landlocked nations. It has now reached 86.

IOC's budget has been growing in proportion to the increase in its activities in response to the demands of the International Decade. From the initial modest $21,015, constituting about one-ninth of UNESCO's budget for marine sciences, the budget grew to $352,000 in 1971-2, constituting almost one half of UNESCO's marine science budget. In 1975-6, IOC's budget reached the unprecedented height of $2,601,000. Not all of this comes out of UNESCO's regular budget. In part it comes out of a special trust fund to which member States make voluntary contributions. But this is still a small fraction of the funds IOC is "co-ordinating" -- several hundreds of millions of dollars -- in contributions of member States to IOC-co-ordinated programs. These funds, however, come exclusively from developed nations. Only about a dozen of IOC's 86 members have an oceanographic capacity, and of these, five -- the U.S.A., U.S.S.R., U.K., Canada, and Japan -- contribute 75-90 percent: an imlalance that is bound to reflect itself in the program, the priorities, and the structure itself of the organization. Developing nations, lacking research ships and capacity, simply cannot participate as equal partners in IOC activities. Many of them are not even interested and choose not to participate -- one of the reasons being IOC's weakness in fishing research which is of far greater interest to developing nations than geophysical research.[5] IOC's staff, furthermore, is drawn almost exclusively from developed nations. No staff members have been recruited from Africa and Asia, except Japan.[6]

Obviously this imbalance must be corrected if IOC is to serve as the scientific arm of the new system of ocean institutions, or become a "Basic Organization" in a functional federation of international organizations.

Future Developments

The Informal Single Negotiating Text makes new demands on the international organizaton of science. IOC must respond to these, and it has already manifested its willingness to do so.

Thus Part III, "Protection and Preservation of the Marine Environment," prescribes the establishment of global and regional organizations "to formulate and elaborate international rules, standards and recommended practices and procedures consistent with this Convention, for the prevention of marine pollution, taking into account characteristic regional features" (Article 6); Article 11 of Part III of the Text postulates "international regional organizations" to promote programs of scientific, educational, technical and other assistance to developing countries for the preservation of the marine environment and the prevention of marine pollution."

The Article then specifies that such assistance shall include, *inter alia,* (i) training of scientific and technical

personnel; (ii) facilitation of their participation in relevant international programs; (iii) supply of necessary equipment and facilities; (iv) enhancing the capacity of developing countries to manufacture such equipment; (v) development of facilities for and advice on research, monitoring, educational and other programs.

Article 10 (Development and Transfer of Technology) of Part III provides for the establishment of *Regional Marine Scientific and Technological Centers*, with the following tasks, *inter alia:* (a) training and educational programs at all levels on various aspects of marine scientific and technological research, particularly marine biology, including conservation and management of living resources, oceanography, hydrography, engineering, geology, seabed mining and desalination technologies; (b) management studies; (c) study programs related to the preservation of the marine environment and the control of pollution; (d) organization of regional seminars, conferences, and symposia; (e) acquisition of marine scientific and technological data and information; (f) prompt dissemination of results of marine scientific and technological research in readily available publications; (g) serving as a repository of marine technologies for the States of the region covering both patented and non-patented technologies and know-how; (h) technical cooperation to the countries of the region.

While further work is required to consolidate Articles 6 and 11 of the section "Protection of the Marine Environment" and Article 10 of the section "Development and Transfer of Technology" of Part III of the Single Negotiating Text, it is clear that the provisions for such regional Centers will either remain dead letter, or their establishment, unifying all marine scientific research, the preservation of the marine environment and the transfer of technology, would basically transform the existing international framework for scientific cooperation. These Centers must necessarily be *operational:* For how else could they serve regions where member States have no scientific operational capacity of their own?

Regional Centers of this kind would be the most suitable instruments to bring developing nations into the international scientific community, to strengthen their scientific capacity, and to serve their research needs. The Single Negotiating Text does not specify, however, how these Centers should be funded nor what would be their relationship to a global international scientific institution (IOC). Such a relationship evidently must be established, and it will require some basic changes within IOC itself. First, it will require the addition of a program of marine biology and fisheries research, equal, in qualitative and quantitative terms, to IOC's ongoing programs in the geophysical sciences; second, IOC will have to assume responsibilities for the transfer of technology, which is presently beyond the scope of its competences; third, the operational

capacity of the regional Centers, even if they are conceived as largely autonomous, will make new demands, both administrative and budgetary, on IOC.

Funds for the regional Centers cannot be expected to come from member States in regions where most or all of the members are developing countries. They cannot come from UNESCO either; nor can regional Centers depend on the voluntary contributions of rich nations. The only realistic alternative is that they be financed from the revenues of other, operative ocean institutions, viz., from the international revenues from the exploitation of living and nonliving resources which depend so crucially on scientific research. In other words, if IOC is to respond to the challenges of coordinating and funding posed by the proposed regional Centers, it must be separated, administratively, from UNESCO, and become part of an operative system of ocean institutions which it will serve and which will finance its services.

Part IV of the Single Negotiating Text imposes a further enlargement of the functions and structure of IOC. Annex II C provides that any dispute...concerning [scientific research], if not settled by negotiation, shall, at the request of any of the parties to the dispute, be submitted to a special commitee of five members appointed by agreement between the parties and selected from a list of experts on marine scientific problems *established by the IOC* (Article 1). Articles 2-9 spell out how the arbitration process is to be carried out. The measures imposed by the arbitrators are to be binding on the parties. Obviously this new function of dispute settlement requires appropriate amendments in the Statutes of IOC.

The number of disputes likely to arise between States, and between States and scientific institutions, with regard to fundamental vs. resource-oriented research in areas under national jurisdiction could be reduced by falling back on, and enlarging on, a procedure already established by a IOC resolution adopted in September, 1969 (Report of the Fifth Session, Annex V. See also UNESCO/IOC Working Group on Legal Aspects of Scientific Research, Summary Report, SC/IOC/VI/15, Paris, 1969).

According to this resolution any research project is to be submitted in advance to the coastal State and to IOC. The IOC Secretary is to transmit the request, together with IOC's request for favorable consideration and, if possible, a factual description of the requesting State's international scientific interest in the project.

In other words, IOC could become the "clearing house" for research projects to be carried out by a State or its nationals in the economic zone or on the continental shelf of another State. IOC would guarantee to coastal States, especially to

developing ones, the scientific nature of such projects. Only projects "cleared," or registered[7] or licensed or participated in, by IOC could be carried out internationally, whether in international ocean space or in the national ocean space of another State. This is the only way of solving the dilemma between coastal State control and the so-called freedom of scientific research. To attain credibility in this respect, IOC would have to be far more representative than it is today, and the full participation of developing nations in its staff as well as in its decision-making processes will have to be assured.

Summary

IOC has gone some length in the direction of becoming a "basic organization." To fully function as the scientific arm of a system of ocean institutions, it must be further strengthened and reorganized, somewhere along the following lines:

1. It must comprize more developing nations in its membership and its staff.

2. It must be administratively and financially detached from UNESCO and funded out of the international revenues of the other operative ocean institutions.

3. It must be responsible for the setting up of the Regional Marine Scientific and Technological Centers postulated in Part III of the Single Negotiating Text.

4. Where regional cooperation does not seem to offer the best possible alternative for international scientific research -- e.g., in the Antarctic Ocean -- it may establish its own scientific operational enterprise.

5. It must co-ordinate the activities of the Regional Marine Scientific and Technological Centers which must be linked to it through an advisory council representing each Center.

6. It must add a program for marine biology and fisheries research to its oceanographic program.

7. It must assume responsibility for the transfer of technology.

8. It must assume responsibility for registering or licensing all internatinal research projects.

9. It must assume responsibility for dispute settlement in accordance with the provisions of Part IV of the Single Negotiating Text.

10. It may establish marine parks for the preservation of endangered flora and fauna and the conduct of international scientific research, and it may assist coastal States in establishing such parks in areas under their jurisdiction.

Footnotes.

1. The Inter-Governmental Oceanographic Commission: Its Capacity to Implement an International Decade of Ocean Exploration. By Margaret E. Galey. Occasional Paper #20, December 1973, Law of the Sea Institute, University of Rhode Island.

2. UN Document UNESCO/NS/176, Paris, 1 February 1962.

3. Margaret E. Galey, op. cit.

4. Ibid.

5. Ibid.

6. Ibid.

7. See UN Document A/AC.138/53, Article 35.

ANNEX TO PARTS I AND II

ANNEX TO PARTS I AND II

SOME COMMENTS ON THE RELATIONS BETWEEN THE INFORMAL SINGLE NEGOTIATING TEXTS AND THE NEW INTERNATIONAL ECONOMIC ORDER

Introduction

With the penetration of the technological revolution into ocean space, the oceans are contributing, and are going to contribute, a rapidly increasing proportion of produce to the world economy. They are playing an ever more vital role in the economies of nations. It is therefore impossible to build a new international economic order without including the oceans. The principles developed by the Sixth and Seventh Special Session of the General Assembly of the United Nations and the Charter of Economic Rights and Duties of States must be applied to States and to the international community in their activities in the seas as on land. Or else there can be no new international economic order.

What is more, the building of new international institutions in the oceans provides an occasion -- the first such occasion -- to create an *institutional framework* to embody the principles of the New International Economic Order. Thus the oceans are our great laboratory for the building of the New International Economic Order. If nations succeed in making a concrete reality of the New International Economic Order in the new ocean institutions, they may then apply the same methodology to other sectors of the world economy. If nations fail to establish a new international economic order in the oceans, there may be no other opportunity for building it anywhere in the foreseeable future; and if there were one, there is no reason to assume that nations would succeed in the more rigid environment of terrestrial sovereignties if they failed in the more flexible, extra-national ocean environment. The U.N. Conference on the Law of the Sea thus is a test case.

The relations between the emerging new law of the sea and the emerging new international economic order ought bo be examined in two ways: What is the contribution of the new law of the sea to the building of the new international economic order? And: How far do the Parts of the Informal Single Negotiating Text fulfil the requirements of the resolutions and of the Programme of Action adopted by the General Assembly as well as of the Charter of Economic Rights and Duties of States?

The following comments are very preliminary. The questions raised will require a great deal of research.

Tentatively, one might make a check-list of ten points on which the documents of the Sixth Special Session and the Charter of Economic Rights and Duties of States require action from the Conference on the Law of the Sea:

1. The development of land-locked States and developing island States;

2. The study of raw materials and development;

3. Permanent sovereignty over natural resources and international cooperation. In particular: efforts to ensure that competent agencies of the U.N. system meet requests for assistance from developing countries in connection with the operation of nationalized means of production;

4. Unexploited or underexploited resources which, put to practical use, would contribute considerably to the solution of the world food crisis;

5. Strengthening of economic integration at the regional and subregional level;

6. Formulation and implementation of an international code of conduct for multinational corporations;

7. Transfer of technology;

8. Equitable participation of developing countries in the world shipping tonnage;

9. Enhancement of participation in decision-making bodies in development-financing and international monetary problems;

10. Definition of a policy framework and coordination of the activities of all organizations, institutions, and subsidiary bodies within the U.N. system, for the implementation of the Programme of Action and the New International Economic Order.

Land-locked States and Developing Island States

Land-locked States are referred to throughout, by all parts of the Single Negotiating Text. Developing island States are not given any special treatment. In Parts I and III of the Text, their interests are subsumed under those of other developing nations. To some extent, furthermore, their problems are not directly connected with the law of the sea. In Part II, however, they probably should be given special attention, particularly with regard to the delimitation of their national ocean space. An island like Malta, for instance, is likely to end up badly squeezed between Libya, Tunesia and claims arising in connection with Italian islands. Similar problems will arise for some developing islands in the Caribbean.

A provision might be added under Article 132 of Part II of the Text.

The participation of land-locked States in the exploration and exploitation of the deep seabed is provided for in Part I of the Single Negotiating Text; their right to transit is assured in Part II. This, of course, is of prime importance economically, and, as pointed out, some improvement could be made here. Their right to fish in the economic zone of neighboring coastal States is equally assured. This, as was pointed out, is a right that is at once too broad and probably economically rather insignificant, at least for many years to come.

On the other hand, landlocked countries have no rights on the continental shelf of neighboring coastal States, on the basis of the theory of the "natural prolongation of the land territory of a State," and on the basis of that same theory, shelf-locked and zone-locked countries are severely disadvantaged. Given the overwhelming importance for development of oil and gas, this is of course the crux of the whole matter. In terms of power politics, nothing can be done about it, at this time. In terms of hard and logical thinking, at least some beginning could be made: Issues could be raised, bargaining positions could be strengthened. New approaches could be adopted *regionally*, especially where their adoption would a) strengthen mutual self-reliance among developing countries; b) reduce the cost of exploration and exploitation for individual developing countries; c) redistribute income in favor of the most disadvantaged (land-locked) nations; d) strengthen the position of developing nations vis a vis the multinational corporations. This would be in accord with the requirements of the documents on the New International Economic Order.

The theory of the natural prolongation of the land territory of a State is due for an overhaul. The continental shelf is indeed called the continental shelf because it is the natural prolongation of the *continental landmass*, which is a thing given in geophysical terms: It is *not* the natural prolongation of the human artifact that is the State. The whole import of the Truman Doctrine, on which the Continental Shelf Convention purports to be based, was to *take away* jurisdiction from coastal States, beyond their territorial sea of three miles, and to turn it over to the Federal (continental) Government, since, being the natural prolongation of the continental mass, it belonged to all of the United States.

This becomes quite clear from a reading of the documents and correspondence preceding the Truman Proclamation of 1946 (Truman Library, Independence, Mo.). One of the concerned citizens who did much to goad the President into making his Proclamation, was a certain Robert E. Lee Jordan, who fought for

the principle of federal ownership of the submerged lands ever since 1937. He urged a law suit, "to the end that the United States Supreme Court will declare superior title and eject all trespassers....Every day lost is an oil producing day gone into oblivion, insofar as over one hundred thousand barrels of oil, daily, *belonging to each and every citizen of all forty-eight States*, is being drained, stolen, and gotten away with -- and *without each and every citizen and tax-payer of all the States* of the United States getting one dime...." (Letter from Robert E. Lee Jordan to President Truman of September 7, 1945. The Harry S. Truman Library, Papers of Harry S. Truman, Official File. Italics added.)

Rarely has a theory been twisted around in such strange ways: Its main intention had been to settle an *internal* matter -- between the States and the Federal Government -- it became an *international cause*. It was to serve to *unify* the management of resources; it became an instrument to *fragment* it.

On the basis of the *real* Truman Doctrine, the continental shelf and its resources, beyond the territorial sea, now of twelve miles, should be the common heritage of all States on the continental landmass: it should not be appropriated by States. A form of cooperation should be deviced, for States occupying the same continental landmass, to administer their shelf jointly.

There are precedents. One of the most interesting among these can be found in the Eems-Dollard Treaties of 1960 and 1962, concluded between the Netherlands and the Federal Republic of Germany. The Treaties are very comprehensive. What is of interest here is the "cooperative agreement" they contain with regard to the exploitation of the natural resources of the subsoil of the estuary. (See Willem Riphagen, "Some Reflections on 'functional sovereignty'," to be published.)

The area under dispute is declared to be common to both countries. "Obviously," Riphagen states, "such solution requires either the establishment of a common 'authority,' or a functional division between the two national authorities. The Treaties generally opt for a combination of both, inasmuch as they provide for a duty to consult and to negotiate, for the establishment of an 'Eems Commission' composed of experts appointed by each of the two Governments, and for an Arbitral Tribunal."

As far as the seabed is concerned, the common area is divided by, roughly, a median line. "The actual exploration and exploitation *activities* on the German side of the line are conducted by German licensees, on the Dutch side of the line by Dutch licensees. The *products* of the exploitation are equally divided between the German and Dutch licensees, as are the costs of exploration and exploitation. Operators on both sides of the line are obliged to cooperate under contracts to be concluded by them and to be approved by the two Governments...." (Riphagen, loc.cit.)

If one were to apply and adapt this precedent to the situation that might arise, e.g., in the Gulf of Guinea, the "Eems Commission" would be replaced by a "regional office or center," in accordance with Article 20 of Part I of the Single Negotiating Text. It would be composed of experts appointed by the Governments of the coastal *and* the land-locked States of the region. The shelf would be divided into management zones to be allotted to all participating States of the region -- coastal and land-locked. Exploration and exploitation costs would be pooled, and profits shared.

Such an arrangement would indeed advance the New International Economic Order: for it would strengthen mutual self-reliance; it would reduce the cost of exploration and exploitation; it would redistribute income in favor of the most disadvantaged nations (including Upper Volta, Chad, and the Central African Republic); and it would strengthen the position of all these nations vis a vis the multinational corporations.

Raw Materials, Permanent Sovereignty over Natural Resources, and Development

Points 2., 3., and 4. belong together.

Our perception of the role of raw materials in the development process is undergoing various changes. On the one hand, there remains the basic fact that such materials -- food and fiber as well as minerals -- are essential, and that the draining of profits and income from the exploitation of such materials by foreign companies under the aegis of a postcolonial extraction economy has been one of the basic obstacles to development. In this sense, the work of the Commission on Permanent Sovereignty over Natural Resources and the Report of the Secretary General (A/AC.97/5/Rev.2, E/3511, A/AC.97/13) are of basic importance and mark a step forward in the emancipation and development of the non-industrialized nations. The numerous U.N. Resolutions, intended to strengthen the application of the principle of permanent sovereignty over natural resources, stand, and there is no going back on them.

If we are serious about building a New International Economic Order, we must look forward, however, not backward, and probe deeper.

There are three terms involved in the principle of permanent sovereignty over natural resources: natural resources, ownership, and sovereignty. All three are undergoing a process of transformation, under the impact of technological, economic, and political developments. By the end of the century, one cannot look at them in the same way one did in the 1950s.

The 'seventies have taught us to consider natural resources not in isolation, one by one, but as a "package" of interdependent parts, the values of which rise and fall together and can be "indexed." The "package," however, is even more comprehensive than that. For it includes *technology* and *social infrastructure*, comprizing both capital and skilled labor. It is these three factors together that produce wealth and development. The relative importance of each factor varies, according to time and place. As we move up the ladder of development, the relative importance of natural resources decreases: Advanced technologies, cutting down waste and availing themselves of recycling techniques and of synthetics, are less resource-intensive than more primitive ones. Without the presence of all three factors, resources alone are not conducive to development.

If a resource is considered part of this wider package, including technology and social infrastructure, it becomes clear that it cannot be "owned" in the classical, Roman-law sense. Resources in this context become part of something that can be *used* and *managed* but *not owned*. In other words, all natural resources are approaching the legal status of the resources of the deep sea, which are the common heritage of mankind, with the five legal/economic attributes enumerated in the Introduction to this study: that is, resources that are the common heritage of mankind (1) cannot be owned; (2) require a system of management; (3) postulate active benefit sharing (not only of financial profits, but of management and decision-making); (4) are reserved for peaceful uses only; (5) must be preserved for posterity.[1]

Sovereignty, finally, is taking on a new dimension, and that is participation: participation in the making of decisions that directly affect the citizens' wellbeing. A State that does not participate in the making of such decisions -- e.g., concerning man-made climatic changes, changes resulting from pollution, or the effects of macro-engineering beyond the limits of its own jurisdiction -- has for all practical purposes lost its sovereignty. International organization, offering a forum for participation in decision-making in matters of transnational impact, thus does not detract from national sovereignty; it is a condition for its preservation and assertion. Sovereignty, in the relations between State and international community, just like freedom in the relations between individual and society, is not conceived here as something pre-existing, something static. It is conceived as something dynamic, that has to be created and continuously recreated in the relationship between State and international community. This concept is applicable to a relationship of conflict, where sovereignty asserts (creates) itself in the threat or use of war; and it is applicable to a relationship of cooperation, where it asserts (creates) itself in the participation in decision-making. Sovereignty thus is not abolished, it is transformed by assuming the new di-

mension of participation.

Thus while there is no going back on the principle of permanent sovereignty over natural resources, it is clear that the ongoing transformation of the concepts of resources, ownership, and sovereignty will necessitate a rethinking of the implications of that principle. Transnational or global planning for basic resources like food and energy, which is an essential tool for the building of the New International Economic Order, must be based on this new conception of resources, ownership, and sovereignty.

The Programme of Action adopted by the Sixth Special Session of the General Assembly calls for efforts to ensure that competent agencies of the U.N. system should meet requests for assistance from developing countries with the operation of nationalized means of production.

This is essential. In the absence of such competent agencies, a developing country, even if it has nationalized its resources and established a national company, will have to fall back on dependence on the services of private multinational companies. Thus the revenues accruing from the exploitation of such natural resources are shared between the country that "owns" them and the private sector of a rich country, thus further enriching the rich.

Suppose, on the other hand, that there were a public international enterprise for oil, such as the one projected for deep-sea mining by the Single Negotiating Text, which could effectively assist developing nations in the exploration and exploitation of their resources: in this case the natural wealth of the developing country would be shared between that nation and the international community which would plow profits back into development. It is obvious that both the developing country and the international community would be better off for it.

The real importance of the Seabed Authority's Enterprise probably is not at all in the mining of manganese nodules which are of marginal importance in the total picture of the New International Economic Order. The real importance of the Enterprise may be that it provides a new form of active, participatory cooperation between industrialized and non-industrialized nations. If this were so, the establishment of other public international Enterprises ought to be considered: first of all for oil and gas which constitute the real wealth of the seabed, for years to come. If the new law of the sea is to make a real contribution to the building of the New International Economic Order, it must mobilize the real wealth of the oceans for this purpose, not the ficticious. The real wealth of the oceans is in oil, gas, food, and shipping.

It may not be realistic to attempt today to establish a public international Enterprise for oil and gas. What could be

done, however, without any difficulty, is to insert a clause, adding, under the Functions and Powers of the Assembly of the Seabed Authority, the power to establish "other" enterprises if and when they appear to be feasible and useful.[2]

Point 4. touches on the delicate question of the underuse of living resources in the economic zones of some of the less developed nations. This is dealt with in Article 51 of Part II of the Single Negotiating Text. It is closely linked to the whole question of the implications of the principle of permanent sovereignty over natural resources. A really satisfactoy solution to the problem of fully exploiting the living resources of the economic zone of such countries, again, can be found only in the establishment of an international fisheries management system, capable of interacting efficiently with the national system. Such a system is postulated in Part II of the Single Negotiating Text, but in no way created. We have dealt with this in Part II, Section 2, of this study.

Another question that should be raised in this context is the development of unconventional living resources in international ocean space, such as squid or Antarctic krill. This should be developed through international cooperation. This vast potential -- which, with presently available technologies, could multiply food from the oceans by a factor of four or five -- is not touched upon by the Single Negotiating Text. It requires, again, the creation of an effective international management system for fisheries, through the appropriate structural changes in COFI and the integration of the activities of the regional or sectoral fisheries commissions.

Economic Integration at the Regional Level

Regional cooperation plays an important role in all four Parts of the Single Negotiating Text.

Part I (Article 20) provides for "regional centers or offices" of the Seabed Authority. Regional representation is the basis for the composition of the Council and is taken into consideration in the composition of all other organs.

Regional organization will play a major role in fisheries management, as indicated in Articles 50,53, and 105 of Part II of the Text. Enclosed and semi-enclosed seas are the basis for regional cooperation with regard to environmental policy, fisheries management and scientific research (Part II of the Single Negotiating Text, Articles 133-135).

Part III of the Text, finally, provides for regional cooperation with regard to the Protection and Preservation of the Marine Environment (Articles 6, 11), monitoring (Article 14), standards (Article 7), the transfer of technology (Article 5).

Chapter 3 (Articles 10 and 11) provides for Regional Marine Scientific and Technological Centers. All this may play a role in strengthening economic integration at the regional and subregional level.

It should be noted that three different kinds of regionalization are involved in building an ocean regime. They are overlapping and, one might say, in a dialectic relationship to one another. They are:

-- political regionalism;

-- continent-centered regionalism;

-- sea-centered regionalism.

Political regionalism originates from the regional groupings in the U.N. and, in particular, at the Conference on the Law of the Sea. It forms the basis of systems of representation in various organs of the ocean regime, particularly in the Council of the Seabed Authority. This has been commented on in Part II, Section 1, of this study. It is likely, furthermore, that existing regional intergovernmental organizations, such as EEC, COMECON, OAS, etc., will have a special relationship with the organs of the ocean institutions, just as they have it at the Law of the Sea Conference -- or even more so: they might, e.g., become Associate Members.

Continent-centered regionalism is foreshadowed in Part I of the Single Negotiating Text, Article 20, establishing "regional centers or offices of the Seabed Authority." If and when developing nations, land-locked and geographically disadvantaged nations -- that is, the overwhelming majority of nations -- will realize that it is more to their advantage, that it will strengthen new forms of economic integration and hasten development, if they interpret the Truman Doctrine in the sense proposed in these pages, these regional centers and offices of the Seabed Authority may develop regional Enterprises for the exploitation of the continental shelf beyond twelve miles. Obviously these would be structurally related to the Seabed Authority itself, and their work would be complementary, not competing. The "boundary" between the area under the administration of the continental center and the area managed by the Seabed Authority directly would therefore be far less important and controversial.

All this, of course, is far in the future. The "regional centers or offices of the Seabed Authority" provided for in Article 20 of Part I of the Single Negotiating Text, may nevertheless be seminal.

Ocean-centered regionalism is developing around fishing, environmental policy, and scientific research. Enclosed and semi-enclosed seas are the most obvious starting point.

Ocean-centered regionalism may have a strong cultural component, for instance, in the Caribbean or in the Mediterranean. Here ancient cultural systems of communication and modern scientific and technological interdependence reinforce each other. This kind of regionalism will play an increasingly important role.

On the whole one may predict a shift from the continent-centered, "geopolitical," regionalism of the nineteenth century, based on sovereignty, ownership, and power, which was part of a war system, to a sea-oriented regionalism of the twenty-first, which is part of a peace system based on the concept of co-operation, the common heritage of mankind, and the transformation of the concept of sovereignty along with that of ownership.

A number of nations will participate in all three forms of regionalism. Far from being unbearably confusing, this may increase stability, after this revolutionary period of building the New International Economic Order. For, as modern anthropology knows, overlapping membership in a number of different social systems increases social stability and reduces conflict.

Multinational Corporations

The only provisions making any contribution under the heading "Formulation and implementation of an international code of conduct for multinational corporations" are contained in Annex I of Part I of the Single Negotiating Text, on Basic Conditions of General Survey, Exploration and Exploitation, which is based on CP/cab.12. It is indicative, however, that, as the Chairman of the Working Group reported on April 25 (Provisional Summary Record of the Twentieth Meeting), the fears of some delegations that the entire seabed might become a prey to exploitation by giant corporations to the detriment of developing countries, was not entirely dispelled. The control of the Authority extends to States members of the Authority or State enterprises, or persons natural or juridical which possess the nationality of a State Party or are effectively controlled by it or its nationals and are sponsored by a State Party, or any group of the foregoing. "Any group of the foregoing" would include the multinationals. There is no other reference to multinationals, however, and it it likely that they would continue to escape through the same legal loopholes through which they have escaped in the past.

Here, again, the work of the Conference on the Law of the Sea should insert itself into, and take advantage of, the work done by the United Nations in general, as well as by specific regions, such as the Andean Group or the EEC, in the broad effort to create a new international economic order. The international control of the multinational corporations is indeed an essential part of such an order.

In response to ECOSOC Resolution 1721 of July, 1972, the U.N. Secretariat published in 1973 and 1974 two volumes of studies on the multinational corporations: *Multinational Corporations in World Development*, and *The Impact of Multinational Corporations on Development and on International Relations*; (the latter, issued by the Secretariat, but compiled by a "Group of Eminent Persons"). These documents give an in-depth analysis of the growth of the multinationals, their impact on world trade, on labor, on development, on international relations. They express the unqualified conviction that there is a need for establishing new international machinery to cope with the problem; because "Governments often feel the lack of power to deal effectively with powerful multinational corporations. Indeed, no single national jurisdiction can cope adequately with the global phenomenon of the multinational corporation, nor is there an international authority or machinery adequately equipped to alleviate the tensions that stem from the relationship between multinational corporations and the nation State."

The report suggests that action should be taken at the *national* level (creation of national commissions to deal with the problem in a systematic and comprehensive way); on the *regional* level (to strengthen the bargaining power of weaker countries vis a vis the big corporations -- e.g., Andean Pact), and on the *global* level: the establishment, under ECOSOC, of a Commission on Multinational Corporations, which should act as the focal point within the United Nations system for the comprehensive consideration of issues relating to multinational corporations; receive reports through the Council from other bodies of the United Nations system on related matters; provide a forum for the presentation and exchange of views by Governments, intergovernmental organizations and nongovernmental organizations, including multinational corporations, labor, consumer and other interest groups; undertake work leading to the adoption of specific arrangements or agreements in selected areas pertaining to activities of multinational corporations; evolve a set of recommendations which, taken together, would represent a code of conduct for Governments and multinational corporations to be considered and adopted by the Council, and review in the light of experience the effective application and continuing applicability of such recommendations; explore the possibility of concluding a general agreement on multinational corporations, enforceable by appropriate machinery, to which participating countries would adhere by means of an international treaty; conduct inquiries, make studies, prepare reports and organize panels for facilitating a dialogue among the parties concerned; organize the collection, analysis and dissemination of information to all parties concerned; promote a program of technical cooperation, including training and advisory services, aimed in particular at strengthening the capacity of host, particularly developing, countries in their relation with multinational corporations.

The Commission, according to the Report, should be assisted by an Information and Research Center on Multinational Corporations, within the Secretariat of the United Nations.

The solution, obviously, is as complex and comprehensive as the problem itself. It may be interesting to note that action on the global level, far from detracting from action on the national and regional levels, on the contrary presupposes such action, and all three levels would re-inforce one another rather than conflicting.

Within such a network, and within the terms of reference of the Programme of Action of the Sixth Special Session of the General Assembly, which require that all U.N. institutions should contribute to the realization of the Programme, it would be dysfunctional if a new international organization like the International Seabed Authority were simply to forget about the multinational corporations. The omission stems from two facts: the failure, thus far, to see the Conference on the Law of the Sea as part of the wider struggle; and a peculiar, very restrictive, and not warranted interpretation of the functions of the Seabed Authority: conceived as a *territorial* entity, located in the middle of the bottom of the sea, with the sole purpose of cultivating its own garden, a "State" which must not interfere with what is going on in neighboring States. True, the Seabed Authority has its own (very poorly defined, and continuously shrinking)"territory." But it is an authority that is *partly territorial, partly functional:* its functional authority extends to regulating the international activities of nations on the Seabed.[3] It is under this second aspect that the International Seabed Authority becomes the proper Authority for the regulation of multinational corporations engaged in international operations on the seabed. These are, above all, the oil and natural gas producing companies.

Following the lines laid down by the Group of Eminent Persons and endorsed by the U.N. Secretariat, one might suggest that together with the Technical Commission and the Planning Commission, the Council of the Seabed Authority should establish a *Commission on Multinational Corporations*. With the necessary adaptations, it would have the functions outlined by the Group of Eminent Persons. In particular, it would be responsible for a Code of Conduct for Multinational Corporations Operating on the Seabed. This Code should cover, inter alia, modes of technology transfer, questions of employment and labor, consumer protection, market structure, transfer pricing, and taxation. It should set international standards of disclosure, accounting and reporting, and harmonize environmental regulations. It should develop forms and procedures to ensure the participation of workers and their unions in the decision-making processes of multinational corporations at the local and international level.

The Commission of the European Communities has gone much further than the United Nations Secretariat. More than a Code, the EEC has proposed a Statute for European Companies which

stipulates that "Commercial companies may be incorporated throughout the European Economic Community as European companies (Societas Europaea 'SE') on the conditions and in the manner set out in this Regulation." The Statute is a most elaborate document prescribing structure, mode of operation, financial obligations and liabilities, etc. for any company incorporated by the European Economic Community. Any European Company must be governed by a Supervisory Board, consisting as to one-third of representatives of the shareholders, as to one-third of representatives of the employees and as to one-third, of members co-opted by these two groups. The reasons that motivated the Commission of the European Communities to propose this Statute all apply equally to the Ocean communities: "the legal framework within which...undertakings must still operate, and which remains national in character, no longer corresponds to the economic framework within which they are to develop if the Community is to achieve its purpose..." There is no doubt, the Statute reflects the quest for a New International Economic Order. It would be appropriate for a Commission on Multinational Corporations established by the Council of the Seabed Authority, to be charged with the responsibility of preparing a similar Statute for companies operating on the seabed under national jurisdiction, although obviously, this is a long-range task.

The Commission should, finally examine the possibility of establishing a public international Enterprise for the exploration and exploitation of oil and natural gas, along the lines adopted for the manganese nodule mining Enterprise. The potential of this Enterprise as a model was recognized already in the 1973 report of the Secretariat: "Recent proposals for the creation of an international authority for the regulation or exploration of resources of the seabed beyond the limits of national jurisdiction indicate further possibilities for the creation of supranational machinery. These proposals also indicate difficult problems of control. The pending negotiations with respect to the seabed would thus throw light on possible arrangements concerning the creation of supranational corporations or machinery dealing with them."

Another way of dealing with the multinationals was proposed in *the Ocean Regime* (Center for the Study of Democratic Institutions, 1968). It moves farther away from the traditional pattern of international organization and approaches that of participational democracy as articulated in the Yugoslav Constitution of 1963. It is based on the idea that the best way to control is through participation and mutual responsibility. Accordingly it proposes, non a *commission on* multinational corporations but a *chamber of* multinational corporations which would participate in the making of decisions falling within the competence and affecting the interests of such corporations. This Chamber would be part of the Assembly structure. The Assembly as a whole thus would have some of the characteristics proposed

by the Group of Eminent Persons for the Commission on the Multinational Corporations, i.e., it would "provide a forum for the presentation and exchange of views by Governments, intergovernmental organizations and nongovernmental organizations, including multinational corporations, labor, consumer and other interest groups." In other words, it would provide a mechanism for interdisciplinary decision-making on interdisciplinary issues. While the multinationals would thus have the advantage of participating in the making of laws and regulations affecting them, they would have to accept the discipline of not making decisions by themselves alone, but in cooperation with the public sector.

Perhaps this is the direction in which we are moving. It is some distance away, however, and the ongoing revolution in international relations will have to advance further before this kind of interaction between the public and the private sector of the international community will become practical.

Transfer of Technology.

The transfer of technology is dealt with in Part I of the Single Negotiating Text, where it is entrusted to the Technical Commission (Article 31). It is also insured by the rules, regulations, and procedures of the Enterprise (Appendix I, paragraph 12 (11)). Since the financial means of the Seabed Authority in the present perspective are very limited, it is to be feared that its effectiveness in the transfer of technology will also be very limited.

Part III of the Single Negotiating Text amply provides for the transfer of technology both with regard to the protection of the environment and scientific research. Since no institutional framework is prescribed to enact these measures, however, they remain hortatory. Only a scientific organ, such as a restructured IOC, with expanded functions, integrated into the system and properly financed, could make the measures effective.

Participation of Developing Countries in the World Shipping Tonnage

No provision whatsoever is made for the equitable participation of developing countries in the world shipping tonnage. It is difficult to see how this could be done in the Single Negotiating Text, Part II, dealing with navigation, such as it now stands. Perhaps at least a reference to the problem could be made. When the Conference on the Law of the Sea takes up the question of restructuring and integrating the activities of the specialized agencies active in ocean space, this problem ought to be considered in connection with the activities of IMCO. In this study it is dealt with in Part II, Section 3, providing for a restructured and strengthened IMCO, integrated into the

system.

Enhancement of Participation in Decision-making Bodies in Development-financing and International Monetary Problems

One place in which the Law of the Sea could make a contribution towards the enhancement of participation of developing nations in decision-making bodies in development-financing and international monetary problems is in Articles 42-46 of Part I of the Single Negotiating Text, establishing a General and a Special Fund of the Seabed Authority. As was noted in the comments on those Articles (Part II, Section 1 of this study), no progress has been made toward increasing the participation of developing nations. The Articles quoted provide -- in deference to the wishes of the industrialized nations -- to divide decision-making into two parts: The industrialized nations, likely to control a balanced Council -- decide, through the Council to which this part of the decision is entrusted, *how much* money is to be distributed; the poorer nations, likely to dominate the Assembly, may decide *how* to distribute the funds among themselves. It is clear which part of the decision is the basic one.

True, it is not likely that there will be much, or anything to be distributed in any case. If and when, however, an Enterprise for oil and gas were to be added to the Seabed machinery, the situation might change drastically. The Articles on *Financial Provisions* ought to be re-examined in view of these considerations.

Policy Framework and Coordination of Activities

The Conference on the Law of the Sea has done nothing toward the definition of a policy framework and coordination of the activities of all organizations, institutions, and subsidiary bodies within the U.N. system. This is attempted in Part III of this study. The model presented there is a development and expansion of the *Oaxtepec declaration*, issued in January, 1974, on the initiative of the International Ocean Institute, Malta, in Oaxtepec, Mexico. This is also reproduced in Part III of this study.

In conclusion one must admit that, in spite of some promising starting points, a) very large sections of the Single Negotiating Text have no relevance to the building of the New International Economic Order. Part I is, potentially, the most relevant contribution. Its effects, however, are bound to be extremely reduced by the limitations imposed on the operations of the Seabed Authority by the provisions of Part II, which is mostly irrelevant to the building of a new international economic order and partly, possibly, counterproductive. Part III has a great potential, but lacks an institutional infrastructure.

It should not be impossible, however, to amend the Text so as to increase the positive impact of the Articles on the building of the New International Economic Order.

Footnotes

1. In a recent private communication (October 24, 1975), Ambassador Sir Egerton Richardson of Jamaica stressed the importance of permanent sovereignty over natural resources to developing nations. "...the mineral in the soil," he wrote, "is like the soil itself, held by the whole nation as tenants in common, with common rights of exploitation, but held to the exclusion [from those rights] of all who are not members of the national group or entity. Is is in this sense that developing nations speak of sovereignty over natural resources -- a sovereignty which is held by the nation in perpetuity and cannot be permanently alienated." The important part of this statement is that natural resources are to be *held by the whole nation in common*, and that *they cannot be owned by others*, i.e., by foreign companies, individuals, or States. This brings natural resources fully into the purview of the common heritage as here defined. There is nothing in the definition that precludes that they be used and managed by and for the benefit of the nation as a whole, in accordance with criteria of international planning, it being understood that the developing nation has its full share in determining such criteria. This is where *participation* comes in, as the new dimension sovereignty is assuming in our time.

2. The possibility of an international public enterprise for oil and gas was discussed, for the first time, at Pacem in Maribus VI (Okinawa, October 1-4, 1975). It was noted that such an Enterprise could have three possible functions: (1) to manage oil and gas in the international area; (2) to enter into joint ventures with developing nations for the exploration and exploitation of their continental shelves; (3) to manage the oil and gas resources of the Antarctic continental shelf. If boundaries are drawn in accordance with the provisions of the Single Negotiating Text, it is not likely that there will be economically exploitable hydrocarbon resources in the international seabed that would warrant the establishment of an Enterprise for oil and gas. If, on the other hand, such an Enterprise were to assume functions (2) and (3), it is obvious that it could play a major role in the building of the new international economic order. The Pacem in Maribus VI working group dealing with the subject stressed that the Seabed Authority would be the proper organ to examine the usefulness and feasibility of such an Enterprise which, eventually, might be established under its authority. This is in full agreement with the views expressed here.

3. As noted in the comments on Part I of the Single Negotiating Text, there is a disturbing disproportion between the *functions* and the *structure* of the International Seabed Authority as it is now being proposed. There are, theoretically, two ways of correcting this imbalance: either by reducing the structure, or by increasing the functions. A reduction of the structure might imply the sacrifice of some of the *Principles* adopted by the XXV General Assembly which call for a structure that is far more than an efficient business. Political considerations and considerations of equity demand a structure of the kind proposed by the Text. To broaden the Authority's *functional responsibilities* as suggested here would be a way to correct the imbalance without interfering with the [territorial] limits of national jurisdiction proposed by the Text.

PART III

PART IV

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SETTLEMENT OF DISPUTES

Present International Law

An effective and viable system for the settlement of disputes is considered by many States to be an essential element of the new law of the sea proposed in the Single Negotiating Text.

The present position may be summarized as follows:

(a) No State can be sued without its consent;

(b) The Charter of the United Nations requires that "parties to any dispute the continuance of which is likely to endanger the maintenance of international peace and security shall, first of all seek a solution by negotiation, enquiry, mediation, conciliation, judicial settlement, resort to regional agencies or arrangements or other peaceful means of their own choice."[1] The Security Council may at any stage of such a dispute recommend appropriate procedures or methods of adjustment.[2] Any member of the United Nations may bring any dispute or situation which might lead to international friction to the attention of the Security Council or of the General Assembly.[3]

(c) The United Nations Charter assumes that "legal disputes should as a general rule be referred by the parties to the International Court of Justice...."[4] but a State has no obligation to accept as compulsory the jurisdiction of the Court in legal disputes unless it has made a declaration to this effect. Only States may be parties to cases before the International Court of Justice.[5]

The Single Negotiating Text

In document A/CONF 62/ WP 9,[6] the Single Negotiating Text attempts to create a credible, effective and flexible dispute settlement system by proposing considerable

elaboration of present international law taking into account the foreseeable problems which may arise as a result of intensified activities in ocean space, of new extensive coastal State rights in the marine environment and of the novel regime for the sea-bed beyond national jurisdiction.

Document A/CONF 62/ WP 9 combines both functional and comprehensive approaches to dispute settlement. The body of the document outlines a general system of dispute settlement. Annex I, divided into three parts, contains provisions on conciliation, arbitration and the Statute of the Law of the Sea Tribunal. Annex II, also divided into three parts, outlines special dispute settlement procedures with regard to fisheries, marine pollution and marine scientific research. Annex III, finally, is a section on information and consultation.

The system proposed for settlement of disputes is based on the assumption that it is preferable when disputes arise, to reach amicable agreement through informal non-compulsory procedures rather than to allow a dispute to fester for a prolonged period of time, hence the stress on flexibility in dispute settlement and on permitting States Parties to a dispute to choose by agreement a wide range of procedures.

The first two articles of the dispute settlement document establish the basic principle that States have the duty to settle disputes between them relating to the interpretation or application of the proposed law of the sea convention by peaceful means and the right to choose such means.[7] Article 3 states that if by prior agreement,[8] Contracting Parties to a dispute have agreed to settle such a dispute through a certain form of settlement, the agreement must be observed and the dispute settled accordingly.

The following four articles deal with the procedures which must have been attempted without success before acceding to judicial settlement; only after the applicable procedures have been terminated without settlement of the dispute, may the parties to the dispute, submit it for judicial settlement.[9]

The remainder of the body of the dispute settlement document concerns binding dispute settlement procedures.

In principle the Law of the Sea Tribunal has binding jurisdiction with regard to any dispute relating to the interpretation or application of the Convention proposed in the Single Negotiating Text, but any Contracting Party may at any time declare that it recognizes as compulsary *ipso facto* the jurisdiction of an arbitral tribunal[10] or

that of the International Court of Justice[11]; if both parties have made such declarations conferring jurisdiction on the same tribunal, either party may submit the dispute to it and the parties are to be bound by its decisions.

The Tribunal[12] may exercise its jurisdiction with respect to:

(a) "Any dispute between Contracting Parties relating to the interpretation or application of the present Convention for which no special procedure has been provided (in)...the Convention and in which no resort has been made to conciliation procedure..."

(b) "Any dispute between Contracting Parties relating to the interpretation or application of the present Convention which has not been settled by conciliation...or by a special procedure..."

(c) "Any dispute in respect of which a clause in the present Convention, the rules and regulations enacted thereunder or an agreement...concluded pursuant to the present Convention or related to its purposes, provides that such dispute be settled in accordance with the procedure specified in this chapter."[13] In exercising its jurisdiction, the competent tribunal may refer scientific or technical matters to experts[14], and may, after hearing the parties, order binding provisional measures to preserve the rights of the parties or to prevent serious harm to the marine environment pending final adjudication.[15]

The dispute settlement document envisages a substantial innovation with regard to the question of parties having access to the tribunals by proposing that the dispute settlement procedures provided for are open not only to "a territory which has participated as an observer in the Third United Nations Conference on the Law of the Sea, an international intergovernmental organization or a natural and juridical person, on an equal footing with Contracting Parties,"[16] subject to their declaring acceptance of the provisions on dispute settlement, agreeing to comply with any binding decisions rendered and undertaking to contribute to the expenses of the dispute settlement institutions.

The traditional rule that exhaustion of local remedies is a precondition for international judicial proceedings, is somewhat relaxed by the provisions of Article 14. The rule is maintained with regard to disputes "between

two or more Contracting Parties relating to the exercise by a coastal State of its exclusive jurisdiction under the present Convention," but in any other type of dispute a Contracting Party may not object to the jurisdiction of the competent international tribunal "solely on the ground that local remedies have not been exhausted."[17]

Special accelerated procedures are envisaged with regard to the special issue of detention by the Authorities of a Contracting Party of a vessel flying the flag of another Contracting Party. In this case the State of the vessel's registry has the right to request, after posting a bond, prompt release of the vessel or of its crew or passengers before the Law of the Sea Tribunal. A decision of the Tribunal that the vessel, crew or passengers be released must be promptly complied with by the Contracting Party concerned.[18]

The parties to a dispute are free to agree that the dispute between them be settled *ex aequo et bono*; if they do not so agree, the law applicable by the competent tribunal is

(a) The law of the present Convention;

(b) Other rules of international law;[19]

(c) Any other applicable law.[20]

The purpose of the following article (Article 17) is to make clear that

(a) A decision rendered by the competent tribunal in respect of a dispute has binding force only between the parties and in respect to that particular dispute, and

(b) That any decision by a commission or committee constituted in accordance with the Convention "shall not consitute a precedent except for that particular commission or committee."

The final article in the body of the dispute settlement document addresses the fundamental issue of whether and if so what reservations Contracting Parties may make to the compulsory settlement of disputes under the Law of the Sea Convention; [21] In the draft document submitted to the President of the Law of the Sea Conference,[22] the working group on dispute settlement proposed that "when ratifying this Convention...a State may declare that, with respect to any dispute arising out of the exercise by a coastal State of its exclusive jurisdiction under this Convention, it limits its acceptance of some of the dispute settlement procedures specified in this Convention to

those situations in which it is claimed that a coastal State has violated its obligations under this Convention by;

> "(a) Interfering with the freedom of navigation or overflight or the laying of submarine cables or pipelines or related rights and duties of other States;
>
> "(b) Failing to have due regard to other rights and duties of other States under this Convention;
>
> "(c) Not applying international standards or criteria established by this Convention or in accordance therewith; or
>
> (d) Abusing or misusing the rights conferred upon it by this Convention to the disadvantage of a Contracting Party."

The formulation in Article 18 of the Single Negotiating Text, however, is changed in form and in substance. It reads as follows: "Nothing contained in the present Convention shall require any Contracting Party to submit to the dispute settlement procedures provided for in the present Convention any dispute arising out of the exercise by a coastal State of its exclusive jurisdiction under the present Convention, except when it is claimed that a coastal State has violated its obligations under the present Convention:

> (i) By interfering with the freedoms of navigation or overflight or the freedom to lay submarine cables and pipelines or related rights and duties of other Contracting Parties;[23]
>
> (ii) By refusing to apply international standards or criteria established by the present Convention or in accordance therewith, provided that the international standards or criteria in question shall be specified."

In addition, when ratifying the Convention, a Contracting Party may declare that it does not accept some or all of the procedures for the settlement of disputes specified in the Convention with respect to one or more of the following categories of disputes:

> (a) "Disputes arising out of the exercise of discretionary rights by a coastal State pursuant to its regulatory and enforce-

ment jurisdiction...;

(b) "Disputes involving sea boundary delimitations between adjacent States or those involving historic bays or titles, provided that a State making such a declaration shall indicate therein a regional or other third-party procedure, entailing binding decision, which it accepts for the settlement of these disputes;

(c) "Disputes concerning military activities, including those by Government vessels and aircraft engaged in non-commercial service...

(d) "Disputes in respect of which the Security Council of the United Nations is exercising the functions assigned to it by the Charter of the United Nations...."[29]

As has already been mentioned, the dispute settlement chapter in document A/CONF 62/ WP 9 contains three annexes. The first annex is divided into three Sections dealing with conciliation, arbitration and the Statue of the Law of the Sea Tribunal.

1. Conciliation. A list of conciliators is maintained by the Registrar of the Law of the Sea Tribunal. Every Contracting Party is entitled to nominate four conciliators, the names of whom constitute a list, for a term of five years. Whenever a dispute is referred to consiliation, the State initiating the procedure notifies the Registrar who notifies all parties. The Registrar assists the parties in establishing a *Conciliation Commission* constituted by two conciliators appointed by the State initiating the procedure and two conciliators appointed by the other party to the dispute: the four conciliators appoint a fifth conciliator as chairman. The Commission decides its own procedure: decisions and recommendations are made by a majority vote. The Commission must report within twelve months of its establishment; its report is deposited with the Registrar who transmits it to the parties to the dispute. The report of the Conciliation Commission is not binding and "shall have no other character than that of recommendations submitted for the consideration of the parties in order to facilitate an amicable settlement of the dispute."[25]

2. Arbitration.[26] Unless the parties agree otherwise, the arbitral tribunal is constituted as follows: the Tribunal consists of five members; each party to the dispute appoints one member who may be a national, the remaining three members are appointed by agreement from among nationals of third States and must be of different nationalities, the President of the Arbitral Tribunal is appointed by the parties to the dispute from among these three members. If there is no agreement in making the appointments the task is normally entrusted to the President of the Law of the Sea Tribunal.[27] The Arbitral Tribunal establishes its own procedure. The Tribunal after giving the parties to the dispute an opportunity to be heard may prescribe provisional measures, binding on the parties, to preserve the rights of the parties to the dispute or to prevent serious harm to the marine environment. Decisions of the Tribunal are taken by a majority vote: awards of the Tribunal shall be "final and without appeal." Any controversy between the parties with regard to the interpretation or execution of the award may be submitted by either party for decision either to the Arbitral Tribunal which made the award or to another Arbitral Tribunal constituted in the same manner.

3. Statute of the Law of the Sea Tribunal. The Tribunal is composed of 15 indpendent members elected for nine years, with recognized competence in law of the sea matters. Members are elected regardless of their nationality: no two members may be nationals of the same State.[28] The elections of members of the Tribunal are by secret ballot and are held at a specially convened meeting of the Contracting Parties. Nine members are sufficient to constitute the Tribunal. "The Tribunal may from time to time form one or more chambers, composed of three or more members..., for dealing with particular categories of dispute, such as disputes relating to fishing, sea-bed exploration and exploitation, marine pollution or scientific research."[29] A judgement rendered by any of the chambers is considered as rendered by the Tribunal. To facilitate the speedy dispatch of business the Tribunal is required to form a chamber which, at the request of the parties, may hear and determine disputes by summary procedure.[30]

The Tribunal establishes its own rules of procedure. When a dispute involves technical questions, it must be assisted by two or more technical assessors, chosen by the President from a list of qualified persons. The Tribunal may refer technical questions to a fact-finding board for non-binding advice.[31]

The Tribunal is open to "States, territories which participated as observers in the Third United Nations Conference on the Law of the Sea, international intergovernmental organizations and natural and juridical persons". [32] The Tribunal must decide disputes on the basis of the law of the proposed Convention, other rules of international law and any other applicable law.[33]

Disputes are brought before the Tribunal either by notification of the special agreement or by written application addressed by a party to the dispute to the Registrar, who shall immediately communicate the application to all concerned and notify all Contracting Parties.[34] The Tribunal is required to make orders for the conduct of the case and may, when appropriate, prescribe provisional measures. Whenever one of the parties fails to defend its case, the other party may call upon the Tribunal to decide in favor ot its claim, before doing so, however, the Tribunal must satisfy itself not only that it has jurisdiction but also that the claim is well founded in fact and law.

Decisions of the Tribunal are by a majority of members who are present; judgments must state the reasons on which they are based. A decision of the Tribunal is binding only between the parties and in respect to that particular dispute. [35] The judgment of the Tribunal is "final and without appeal"; in the event of a dispute as to its meaning, the Tribunal shall construe it upon the request of any party.[36]

The Tribunal may propose amendments to its Statute by written communications to the Contracting Parties; all amendments are effected by the same procedure as that required for amendments to the Law of the Sea Convention.[37]

Special Procedures

The second section of the annex deals with special procedures for dispute settlement. Special procedures are envisaged for disputes in respect of fisheries, marine pollution and scientific research.

Disputes between Contracting Parties concerning the application of Convention provisions relating to fisheries, if not settled by negotiation, shall at the request of any of the parties to the dispute, be submitted to a special committee of five members appointed by agreement between the parties and selected from a list of experts on legal, administrative, or scientific aspects of marine fisheries[38] established by the United Nations Food and Agriculture Organization.[39] Failing agreement between the parties, the members of the special committee are appointed by the Director General of the Food and Agriculture Organization in consultation with the parties. The special committee organizes its own procedures and may prescribe binding provisional measures to preserve the rights of the parties to the dispute. The special committee must give its decisions, which can be by majority vote, within five months of the date of appointment of its members.[40] The decisions of the special committee are binding but may be appealed for lack of jurisdiction, infringement of basic procedural rules, abuse of power or gross violation of the proposed Law of the Sea Convention. If the parties agree to request the special committee to undertake an investigation of the facts giving rise to the dispute, the findings of the committee are conclusive; in this connection the special committee may formulate recommendations which "shall constitute a basis for a review by the parties concerned of the question giving rise to the dispute."[41]

The special procedures with respect to marine pollution and marine scientific research are identical, with the members of the special committee chosen from a list maintained respectively by the Inter-Governmental Maritime Consultative Organization and the Intergovernmental Oceanographic Commission.

Finally, the third annex of document A/CONF 62/WP 9 provides for consultation between Contracting Parties with regard to the adoption and application of national measures within the scope of the proposed Law of the Sea Convention. For this purpose pertinent information must be communicated to the Secretariat of the United Nations which must promptly publish it together with any observations, objections and protests communicated by other States in this connection. "Each Contracting Party shall

respond promptly to a request by another contracting Party for consultation with respect to the adoption or application of (these) measures."[42]

Comments and Suggestions

No detailed comments are offered on this section of the Single Negotiating Text despite its critical importance, due, on the one hand, to the complexity of the subject which would require extensive treatment and, on the other hand, to recognition that, on the whole, the proposals contained in the Negotiating Text are difficult to improve upon in view of existing political realities.

It is only desired to underline a very few points.

First, the Single Negotiating Text attributes great importance to dispute avoidance through exchange of information and consultations between Contracting Parties which may have differences. The purpose is to avoid that differences escalate into disputes. Consultations between parties to a dispute must be renewed whenever any stage of the dispute settlement process is unsuccessfully terminated.

Secondly, the Single Negotiating Text stresses informal dispute settlement procedures on the theory that many problems cannot be solved on the basis of strict law and that informal procedures promote accommodations of interests and solutions far better than formal judicial procedures.

Thirdly, the Single Negotiating Text gives an unusual degree of importance to fact-finding and to participation (without vote) in the judicial process of persons with special technical qualifications.

Fourthly, the Single Negotiating Text stresses flexibility in the dispute settlement process: States are permitted a wide choice of dispute settlement mechanisms, including tribunals, and the system proposed combines in a novel way functional elements in the chapter on special procedures (Annex II) with a comprehensive system. It is hoped in this way to encourage States to accept binding dispute settlement procedures and it is hoped to achieve a settlement of disputes which is both adapted to different categories of problems and a wide measure of uniformity in the interpretation of the law of the sea.

Fifthly, the Single Negotiating Text makes clear that, before attempting judicial settlement, conciliation procedures, while always voluntary, should, normally, have been terminated without settlement of the dispute. Judicial settlement is the last resort. The establishment of an international list of conciliators is an interesting proposal.

Finally, the dispute settlement system envisaged contains a number of interesting and importnat innovations (Arbitral Tribunal,method of elections of the members of

the Law of the Sea Tribunal, provision for the establishment within the Tribunal of Chambers for dealing with particular categories of disputes and the obligation of the Tribunal to establish a chamber empowered to determine disputes by summary procedure; provision for access to the Law of the Sea Tribunal of natural and juridical persons and entities which are not States, etc.) which merit detailed analysis.

Despite the excellence of the provisions on dispute settlement in the Single Negotiating Text there are some points which warrant careful consideration. Among these are the following:

1. The provisions in Part I (Articles 32 and 33, 57-63) of the Negotiating Text should be brought into conformity with the provisions in Part IV (document A/CONF 62/WP9);

2. Careful attention should be given to the question of whether with reference to applicable law, it is really necessary to retain in Article 16 (1) of Part IV the clause "other rules of international law".

3. While realizing the existence of strong differences of opinion at the conference, Article 18 of Part IV contains such wide limitations to the scope of the dispute settlement procedures envisaged as to seriously reduce their usefulness. No right is a legal right unless it is subject to some form of legal review. The manner in which the authority of the coastal State is exercised in the exclusive economic zone cannot be the sole concern of that State, the interests of others are often, indeed usually, affected, particularly in a region where States have rather short coastlines. It is consequently suggested that consideration be given to:

(a) Replacing Article 18 (1) by the contained in Article 17 of document SD. Gp/2 Sess/No. 1/Rev. 5;[43]

(b) Adding to Article 18 (2) (a) the words "except in cases involving an abuse of power or failure to have due regard to the rights of other States or to international community interests;"

(c) Deleting the words "or all" in lines 2 of Article 18 (2).

The changes would ensure that some dispute settlement procedures, even if not binding, are available in the great majority of foreseeable disputes with regard to the interpretation and application of the proposed law of the sea convention.

Footnotes

1. United Nations Charter, Article 33.

2. *Ibidem*, Article 36 (1).

3. *Ibidem*, Article 35 (1).

4. *Ibidem*, Article 36 (3).

5. Statute of the International Court of Justice, Article 34 (1).

6. This document has sometimes been referred to previously in the text as Part IV of the Single Negotiating Text, because it is considered by many delegations as an integral part of the basic accommodation of interests which is attempted by the Single Negotiating Text, and because it is document (SD/Gp/2 Sess/No. 1/Rev. 5) prepared by a widely representative conference working group, revised by the President of the Law of the Sea Conference and submitted by him to the Conference.

7. UN document A/CONF 62/ WP 9/ Article 1 mentions specifically the peaceful means indicated in Article 33 of the United Nations Charter, but Article 2 affirms the right of Contracting Parties to settle disputes "by any peaceful means of their own choice."

8. The agreement can be general, regional or special.

9. UN document A/CONF 62/WP 9, Article 4-7. The conciliation procedure outlined in Article 7 is of particular importance: ordinarily judicial settlement may be invoked only after the conciliation procedure has failed.

10. The arbitral tribunal must be constituted in accordance with the provisions of Annex 1 B of document A/CONF 62/ WP 9.

11. Access to the International Court of Justice is subject to Article 93 and 96 of the Charter of the United Nations and of Articles 34, 35 and 63 of the Statute of the Court. See *Ibidem*, Article 13 (2).

12. Or the International Court of Justice.

13. UN document A/CONF 62/WP 9, Article 10 (1). The jurisdiction may not be exercised if it is expressly excluded by the Convention, or if the Convention makes provision that the dispute must be settled in accordance with a specified annex to document A/CONF 62/WP 9. When a

binding decision has been rendered as a result of a special procedure, the jurisdiction of the tribunal may be exercised only when a party to the dispute claims that the decision was invalid because of: lack of jurisdiction; infringement of basic procedural rules; abuse or misuse of power or gross violation of the Convention.

14. *Ibidem*, Article 11.

15. *Ibidem*, Article 12.

16. *Ibidem*, Article 13 (4).

17. *Ibidem*, Article 14.

18. *Ibidem*, Article 15. The provisions of this article give a legal remedy to the flag State in the event that a coastal State fails promptly to release arrested vessels and their crew in accordance with the provisions of Article 60 (2) Part II and of Article 29, (Protection and Preservation of the Marine Environment), Part III of the Single Negotiating Text.

19. The draft document submitted to the President of the Conference by the working group (Un document Sd. Gp/ 2 Sess/ No. 1/ Rev. 5) did not contain the words "other rules of international law". The acceptance of this clause by the Conference could leave open the possibility that some United Nations General Assembly resolutions, which are controversial for some States, could be considered applicable by the competent tribunal.

20. Ibidem, Article 6. "Any other applicable law" is a clause both limiting and general: it probably includes rules, regulations, standards and procedures established in accordance with the Convention and national laws and regulations enacted pursuant to the Convention. An authoritative interpretation of the words "any other applicable law" would, however, be useful.

21. It is evident that if excessive and excessively wide reservations were permitted to the compulsory dispute settlement procedures proposed, the protection of the rights and interests of all States and of mankind as a whole would not be achieved; on the other hand if no reservations were permitted the "sovereignty" of States could be considered circumscribed.

22. UN document SD/Gp/2 Sess/ No. 1/ Rev. 5, Article 17.

23. It is noted that "All States...enjoy in the exclusive economic zone the freedoms of navigation and overflight and of the laying of submarine cables and

pipelines and other internationally lawful uses of the sea related to navigation and communication." Document A/CONF 62/WP 8/ Part I, Article 47.

24. UN document A/CONF 62/ WP 9, Article 18 (2).

25. For details, see document A/CONF 62/ WP 9, Annex 1 A.

26. For details, see document A/CONF 62/ WP 9, Annex 1 B.

27. But there are other choices. See document A/ CONF 62/ WP 9, Annex 1 B, Article 2 (5).

28. UN document A/CONF 62/ WP 9/ Annex 1 C, Articles 2, 3 and 5. Detailed provisions are prescribed for elections and vacancies (Articles 3-11). It is noted that: (a) members of the Tribunal are elected according to the following pattern; four from the group of African States, three from the group of Asian States, two from the group of Eastern European States, three from the group of Western European and Other States; (b) a Contracting Party may nominate not more than two persons for election; (c) no member of the Tribunal may be financially interested in any operations of any enterprise concerned with the exploration or exploitation of the resources of the sea or sea-bed; (d) the President of the Tribunal must declare a seat vacant if, in the unanimous opinion of the other members of the Tribunal "a member has cleased to fulfill the required conditions." In this latter connection, however, see A/CONF 62/WP 8, Part I, Article 32 (9) where it is suggested that a member of the Tribunal may only be removed from office by the Assembly with the approval of the Council.

29. *Ibidem*, Article 14 (2). This is a constructive innovation which dould permit expert evaluation of facts underlying a dispute.

30. *Ibidem*, Article 15.

31. *Ibidem*, Article 16. This again is a constructive provision. The members of the Tribunal receive salaries, allowances and other compensation from all taxation (Article 18); the expenses of the Tribunal are borne by the Contracting Parties (Article 19).

32. *Ibidem*, Article 20. The International Court of Justice is open only to States.

33. See Un document A/CONF 62/ WP 9, Article 16.

34. UN document A/CONF 62/ WP 9/ Annex 1 C, Article 25. This is a useful innovation which, facilitates

intervention in a case before the Tribunal by interested Contracting Parties.

35. *Ibiden*, Article 31. The article restates the substance of Article 17, document A/CONF 62/ WP9.

36. *Ibidem*, Article 34.

37. *Ibidem*, Article 36.

38. Each Contracting Party may designate six qualified persons for inclusion in this list.

39. UN document A/CONF 62/ WP 9/ Annex II A, Article 1.

40. In reaching its decision the special committee must comply with the rules of general international law and any special agreements reached between the parties with a view to settling the dispute. Ibidem, Article 7.

41. *Ibidem*, Article 9.

42. UN document A/CONF 62/ WP 9, Annex III, Article 2.

43. This document was submitted by the working group on dispute settlement to the President of the Conference.

APPENDIX

Appendix

THE ECONOMIC POTENTIAL OF THE OCEAN

The seas cover about 362 million square kilometers, or approximately 72 percent of the surface of the earth.

Directly profitable economic uses of the oceans include *extractive uses* and *services*.

Extractive uses are the exploitation of *living resources*, *non-living resources*, and *energy*.

Services include, above all, *shipping and navigation*.

Some basic data on these four categories of economic activities are summarized in the four sections of this Appendix.

Section I

LIVING RESOURCES OF THE SEA

Living resources of the sea comprise marine plants, marine mammals, fish, crustaceans and molluscs, cephalopods (squids, etc.), myctophids (lantern fish), and euphausids (krill). Commercial harvesting of myctophids and euphausids is as yet insignificant, and the harvest of cephalopods is still small.

Table 1

World catch of marine living resources (excluding marine mammals)

in thousand metric tons [1]

	1965	1970	1973
Fish	41,129	55,747	50,220
Crustaceans	1,185	1,576	1,726
Molluscs	2,893	3,253	3,350
Other [2]	237	103	122
Aquatic plants	652	875	1,088
Total	46,196	61,554	56,506
Peru [3]	7,631	12,613	2,300
Total, excluding Peru	38,565	48,941	54,206

Table 2

Marine Mammals

in thousand metric tons

	1965	1970	1973
Dolphins	2.0	4.0	4.0
Miscellaneous	2.0	2.0	2.0
Total	4.0	6.0	6.0

Table 3

Marine Mammals (Whales and Seals)

In Number

	1965	1970	1972
Whales[4]	68,322	47,665	41,567
Seals	471,070	548,315	398,096

About 60 percent of the world catch is used directly for human consumption and the remainder is reduced for fishmeal, fertilizer and other purposes.

The total catch of marine living resources was valued at approximately $11 billion in 1974.

Marine Plants

Marine plants are used for food, particularly in Japan and Korea, and fertilizer. Some marine plants are known to possess medicinal properties and are exploited for pharmaceutical purposes. Japan takes more than half the world harvest of marine plants.

Marine Mammals

The proportion of the marine mammal catch to the total catch of marine living resources has been declining for at least fifty years, and marine mammals now contribute less than 2 percent to the marine harvest. Some species of whales have been seriously depleted.

Large whales are now exploited virtually only by the Soviet Union and Japan: small whales are also harvested in significant numbers by Norway, Greenland and the Faeroe Islands. The main sealing countries are Canada, Norway, Uruguay, South Africa, Soviet Union and United States.

Other Living Resources of the Sea

Catches have increased consistently since World War II up to 1972 and, apart from the Peruvian anchoveta fishery, continue to increase. About 90 percent of the present catch is taken in marine areas which may become part of an economic zone under exclusive coastal State resource jurisdiction.

Two States -- Japan and the Soviet Union -- harvest about one-third of the world catch and twelve other States share a further 30 percent.

Prospects for the Future

Potential maximum sustainable yield of the living resources of the sea has been variously estimated: in general estimates tend to be increasingly conservative and there are indications that expert opinion may be inclining to the view that we may be approaching maximum sustainable yields of most commercially significant stocks under present conditions of exploitation[5]. In any case it appears unlikely, even in the most favorable circumstances, that the yield from presently commercially exploited stocks under present conditions of exploitation can continue to rise for many more years.

Prospects for major expansion of world fisheries depend on (a) substantial improvement in fishery management, particularly at the national and regional level. This will require reform of the present system of international fishery commissions and the creation of some global fishery mechanism with significant capabilities and powers. Also required is considerable strengthening of fishery research; (b) commercial exploitation of fish stocks at greater depths; (c) commercial exploitation of living resources now unexploited or inadequately exploited (cephalopods, myctophids, euphausids).

We may also look to fish farming to increase our harvest of marine living resources. While the feasibility of fish farming in the open sea remains uncertain, the raising of molluscs in protected coastal waters is already a reality and some countries are experimenting with the breeding of crustaceans and some species of fish. The commercial success of these experiments will, *inter alia*, depend on control of pollution and diseases and on reforms in national laws relating to fisheries.

Conclusions

Although the living resources of ocean space contribute far less than living land resources to the needs of mankind, we are already passing from a situation of abundance to one of scarcity with regard to many commercial species, largely because we are still at the hunting stage in our exploitation of marine resources. Ocean space yields could, however, be multiplied were measures taken as indicated above.

Footnotes

1. Adapted from FAO, Yearbook of Fishery Statistics, Vol. 36, Catches and Landings.

2. Including corals and other animal products.

3. The decline in the over-all world figure is due only to the catastrophic decline of the Peruvian anchoveta fishery. If one disregards this factor, the annual catch is still rising.

4. FAO groups 61 and 62.

5. As an indication of widely held views it is noted that Gulland (1971) estimated maximum potential sustainable yield of living marine resources at approximately 400 million tons of which a little more than a quarter marine mammals, fish, crustaceans and molluscs; the Soviet Minister for Fisheries (1973) has given a figure about double the 1972 fish catch. These estimates suggest a maximum sustainable yield of about 100 to 110 million tons for presently exploited living resources of the sea. On the other hand Borgstrome (1972) provides evidence suggesting that in many cases maximum sustainable yields have been reached.


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A. World Catches, Values[2] and Recent Trends

	Millions of tons 1971	% 1971	Mean % annual increase, 1964-71	1971 ex-vessel values $ x 10-9	%	1970-71	increase in catches 1971-72[3]
Atlantic Ocean	23.3	38.1	3.7			-1.2	4.0
Pacific Ocean[2]	34.3	56.1	4.7			-1.0	-14.0
Indian Ocean	2.7	4.4	4.9			11.5	- 7.7
Antarctic (whales)	0.3	0.5	-15.6			-0.7	- 2.5
Total (incl. all whales)	61.2	100	3.9	11	100	-0.8	- 7.0
Total (excl. Peru)	50.6	82.7	4.3	10.8	98	2.6	3.0
Northern temperate (excl. whales)	32.4	53.0	4.0			2.7	3.1
Tropical temperate (excl. whales)	12.5	20.4	8.0			8.4	1.3
Southern temperate[2] (excl. whales)	15.5	25.2	2.7			-11.2	-34.0
Fishes (incl. sea catch anadromous spp.)	54.4	89.0	4.1	8.5	77.8	-0.9	- 8.0
Fishes (excl. anchoveta)[1]	43.2	70.6	4.6	8.4	76.5	2.5	3.4
Crustaceans	1.6	2.7	5.1	1.4	12.7	3.2	- 0.7
Molluscs	3.2	5.2	2.3	0.9	7.8	-2.3	9.5
Whales	0.8	1.4	-10.5	0.2	1.5	-2.5	-29.2
Other animals	0.1	0.2	-1	?	?	?	?
Other plants	0.9	1.5	7	0.1	1.1	6	- 4
Catch used for direct human consumption	35.6	58	3.0	10.4	95	2.5	2.4
Catch reduced to meal and oil, etc.	25.6	42	6.3	0.6	5	-4.5	-19.4
Catch by "developed" countries	34.2	55.9	3.8	8.2	65	0.7	2.1
Catch by "developing" countries[2]	27.0	44.1	3.9	4.4	35	-2.0	-13.8
" " " " excl. Peru	16.4	26.9	5.2	4.2	33	7.5	4.2
Catch by countries with:							
Market economies	50.1	82.0	3.5	9.4	75	-1.0	- 8.7
Developed market economies	26.5	43.3	3.0	6.4	51	0.8	1.0
Developing market economies[2]	23.7	38.7	4.1	3.0	24	-3.0	-18.5
Centrally planned economies	11.1	18.1	5.6	3.2	25	2.0	3.0
Asia	3.3	5.4	2.6	1.4	11	6.1	0.5
USSR and E. Europe	7.7	12.6	7.2	1.7	14	0.3	5.6

Notes 1) Engraulis ringens.

2) These values diminished in 1971 by 11.6 millions tons, 17.3% if Peru excluded.

3) 1971-72 column for different economic classes includes inland catches.

70%

B. Production Supply and Consumption per Capita 1970. Fishermen, and relative significance of fisheries.

	Kg. per capita				% of totals		Population				
	Catch	Supply[1]	Consumption[2]	Inland Catch[3]	Supply	Consumption	% of total	Mean annual growth rate (%)	% fishermen	% GNP (1969)	Value marine catch as % of GNP
World	16	16	10	2.4	100	100	100	2.0	1.4	100	0.44
Developed countries	31	38	22	1.3	69.5	64.8	30	1.0	1.5	88.3	0.34
Developing countries	11	8	5	2.9	30.5	35.2	70	2.3	1.4	11.7[4]	0.89
Market economies	20	19	11	1.5	81	75	69.1	2.0	1.7		
- developed	36	45	25	0.6	56	48	20.0	1.0	1.7		
- developing	14	9	6	1.8	25	27	49.1	2.4	1.7		
Centrally planned economies	10	10	8	4.6	19	24	30.9	1.6	(0.9)		
- Asia	4	(4)	(4)	5.4	(5)	8	21.3	1.9	(0.9)		
- USSR and E. Europe	22	23	18	2.8	14	16	9.6	1.0	0.9		

Notes 1) "Supply" is catch plus imports less exports.

2) "Consumption" is an index of human food intake, directly or indirectly, of marine origin. It is calculated as Supply for direct consumption plus one tenth of supply for livestock feeds, etc., all in round fresh weight equivalents.

3) Inland fish catch per capita added to "consumption" gives consumption of animals (and plants) of aquatic origin.

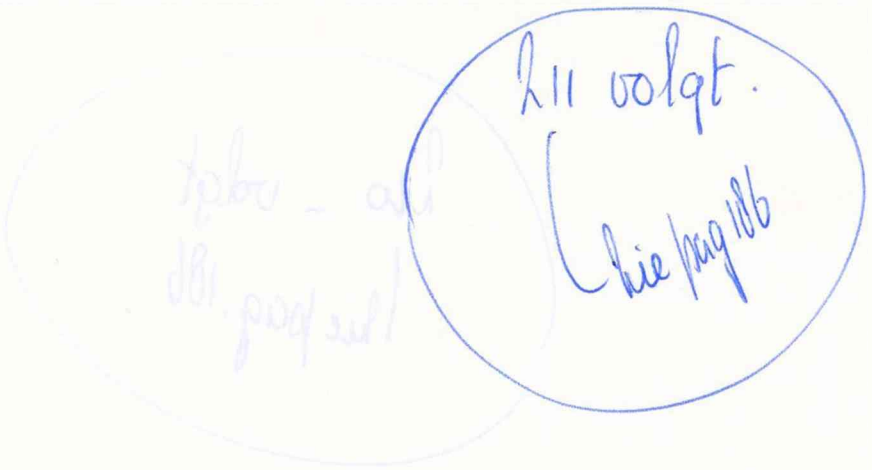
4) Excludes China, N. Korea, N. Vietnam.

70%

C. Geographical Origins of Catches, 1972

	% of catch taken from:				
	All areas	Off own coasts	Off other coasts	Off coasts of other developed countries	Off coasts of other developing countries
By developed countries	100	58.3	41.7	31.0	10.8
By developing countries	10	95.1	4.9	2.7	2.3

Note: Marine catch, excluding whales = 55.8×10^6 tons, of which 61% by "developed" countries and 39% by "developing" countries.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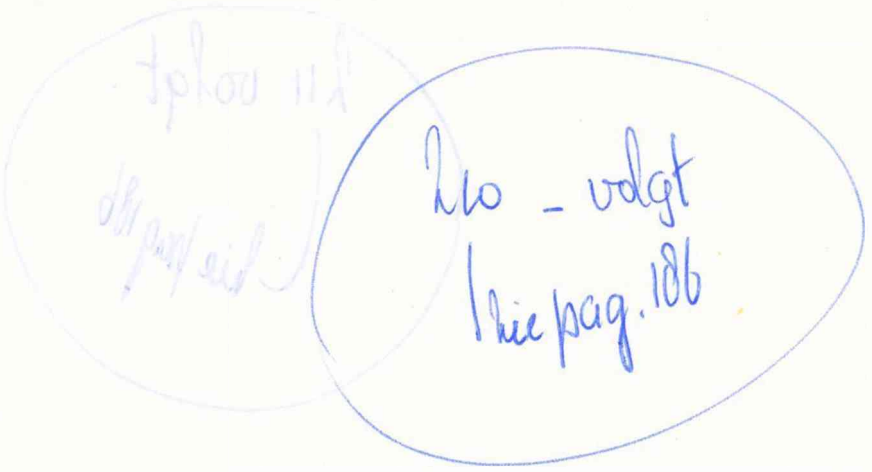
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