

The United Nations Convention on the Law of the Sea in the Twenty-First Century

The Twenty-first Century

We live in an age of growing uncertainties and accelerating change. One thing, however, that is certain, is that the next fifty years will be different in many ways from the past fifty years. Technological and economic conditions will have changed in unpredictable ways; perhaps the climate will be different, both regionally and globally; our children and grandchildren will be running the affairs of States. What we can do, what we owe to them, is to leave the planet in some sort of shape that does not completely preempt and foreclose their decisions: We do not want to leave them in a Nuclear Winter; We do not want to leave the Seas and Oceans as malignant deserts, spreading disease, decay and death over coastal areas and hinterlands. It might take the oceans thousands of years, perhaps millions, or eternity, to create new life forms, and there would be nothing our children and grandchildren could do about it. Present trends are pointing menacingly in this direction, but it is still within our grasp to do something about it, and indeed many things are being done.

The Ocean, our Common Heritage

The ocean cover almost three quarters of the surface of our blue planet; the continents are islands floating on the world ocean; the ocean links and unites the continents, rather than separating and isolating them. The world ocean is our

Common Heritage.

The importance of the world ocean as a potential supplier of goods (food, fibre, genetic resources, metals, minerals, energy) and services (trade routes, tourism), as well as a repository of national, regional and global security cannot be overstated. The total value of ocean-based and ocean-related industries today is somewhere between 7 and 8 trillion dollars, and likely to increase rather steeply in the twenty-first century, if we manage the oceans wisely. Recently the *Herald Tribune* published an article under the title "A Wealth of Data on Ocean Floors" -- really something to watch for the Sea-bed Authority -- in which we are told that there are 228,98 miles of fiber-optic cable on the floors of the world's oceans, enough to encircle Earth almost 10 times; that another 177,717 miles of cable are planned for installation worldwide by the end of 1999, and that the market value of this ocean-dependent industry will be \$1 trillion a year by 2000.

From our perspective, in the Year of the Ocean, it might indeed appear as if the twenty-first century were going to be the Century of the Ocean.

Above all, however, the world ocean is an essential part of the biosphere; it is a crucial factor in the carbon cycle and a determinant of the planet's climate. Through photosynthesis by microscopic plants in the surface layer of the ocean, carbon dioxide is drawn from the atmosphere and oxygen is released. Marine plants produce annually 36 billion tons of oxygen, equal to 70 percent of oxygen in the atmosphere. The ocean absorbs carbon dioxide from the atmosphere to the extent that there is over 60 times more carbon dioxide in the ocean than in the atmosphere. The exchange of oxygen and carbon dioxide (and other gases)

has a profound effect on the earth's climate.

. How much of this carbon dioxide comes from the sea-floor, and how much is absorbed from the atmosphere is not yet very clear. What has become clear from continuous measurements over the past decades is that there is a great deal of oscillation between summer and winter. The oscillation is highest in the far north and very small in the oceanic regions of the southern hemisphere. In summer, plant photosynthesis exceeds biological respiration from plants, animals and bacteria, and carbon dioxide is taken out of the air. In winter, just the reverse occurs, and atmospheric carbon dioxide rises. The amplitude of this seasonal oscillation is increasing, probably indicating that forests and other biota are growing because of the fertilizing effect of increased atmospheric carbon dioxide!¹ This, in turn, would lead to the absorption of more carbon dioxide and mitigate the greenhouse effect.

The ocean's contribution of "ecosystem services" is very much larger than that of terra firma.

Coral reefs and mangrove swamps, for instance, serve as "disturbance regulators." Where you have them, the power of tsunamis is broken, and coastal populations and property are safe behind their protective shield. They also serve as habitat/refugia, breeding grounds, and nutrient cyclers. Leaving apart the colossal quantity of unknowns, it appears that by far the largest portion of the total global flow value of the planet's ecosystem services is contributed by the

¹Roger Revelle, "The Scripps Institution of Oceanography, California," in E.M. Borgese (ed.) *Ocean Frontiers*, New York: Harry Abrams, 1992.

“water system, “ consisting, more than 90 percent, of the world ocean.

While the ocean covers over 70 percent of the planet’s surface area, it²accounts for 99 percent of the volume that is known to sustain life-- most of which is still unknown, and the more we know the more we know how little we know. While we are rightly concerned with the anthropogenic decline in biodiversity, scientists are continually discovering new concentrations of diversity. In recent years scientists exploring the oceans middle depths, beyond the reach of sunlight, have discovered a host of new species composing productive ecosystems thus far unknown to us but already wetting the appetites of industrial high-tech fishing companies. ..The deep sea bottom of which little more than 1.5 percent has been explored, harbours thousands, perhaps millions, of species of small invertebrate animals, besides the unearthly creatures --crustaceans, molluscs and giant worms inhabiting the volcanic sea-floor spreading centres. In an area of about 21 square metres on the ocean floor, off the Atlantic coast of the United States at a depth between 1,500 and 2,500 metres, scientists sampled and found 90,672 individual organisms representing 798 species -- of which as many as 460 were unknown until now³

What we do know, however, is that the ocean is a medium different from the earth: so different, in fact, that it forces us to think differently. The medium itself, where everything flows and everything is interconnected, forces us to “unfocus,” shed our old concepts and paradigms, and “refocus” on a new

²*Biodiversity in the Seas*

³.*Sea Technology*, March 1997, “Editorial” by David M. Graham p.7.

paradigm. Fundamental concepts evolved over the millennia on land, like sovereignty, geographic boundaries, or ownership, simply will not work in the ocean medium where new political, legal and economic concepts are emerging which eventually will act on the social, economic, and political order of the next century

The Greatest Achievement

For roughly three centuries the oceans were governed by a simple law: the freedom of the seas, under which everyone could navigate and fish and do as they pleased, provided only that they accepted similar rights for others. Coastal state jurisdiction was recognized for a narrow belt of water along the coast -- three miles, the firing range of a good cannon -- for the sake of national security. The law was made by, and served the interests of, the strong maritime nations. They ploughed the seas and subjugated other people who had no voice in the making of international law and order. That law, moreover, was made at a time when the oceans seemed vast -- nearly infinite, capable of absorbing human wastes without leaving a trace, and of producing apparently inexhaustible fish supplies.

All this has changed. Distances have yielded to speedier and more powerful vessels, shrinking the world. Supplies of seafood have dwindled in quantity or quality under the impact of industrialized fishing. Rising populations and the industrialization of coastlines have started to poison the marine environment farther and farther out, deeper and deeper down.

The "freedom of the seas" regime of international law was not able to

cope with this new reality. A new order for the seas and oceans was needed, and, as independent States tripled in number during the 1950s and 1960s, they all wanted to have their say in the making of this new order.

The newly independent, small island State of Malta, in the middle of the Mediterranean, took the initiative, in 1967, that led to the calling of the Third United Nations Conference on the Law of the Sea (UNCLOS III) -- the largest, longest, and most complex of all international conferences in history..

It took five years of preparation (1968-73) and nine years of deliberations of UNCLOS III (1973-82) for the United Nations Convention on the Law of the Sea to emerge. When it was opened for signature on December 10, 1982, the Secretary-General of the United Nations declared this to be the most important event since the creation of the United Nations in 1945.

The process of ratification was long and tortuous. The Convention entered into force on November 16, 1994, one year after the sixtieth ratification.. Since then, another 62 States have ratified the convention, bringing the total up to 122; almost all the institutions it creates have in fact been established: The International Sea-bed Authority in Jamaica, with all its organs; the International Tribunal for the Law of the Sea, in Hamburg, Germany, which has already handed down its first, and quite complex, judgment (*St Vincent and the Grenadines vs. Guinea*); the Commission on the Limits of the Continental Shelf, at the Headquarters in New York; three meetings of the States Parties have taken place, and over 100 States have made laws and established institutions for the management of ocean space under their jurisdiction and initiated projects for sustainable development in their coastal zones.

What is New?

The Convention marks a point of breakthrough in the history of international law and relations. It is the beginning of a process, continued and developed through the United Nations Conference on Environment and Development (Rio, 1992) and its many follow up conferences, Conventions, Agreements and Programmes,⁴ and pointing towards the new political, social, and economic world of the twenty-first century.

The Convention, which consists of seventeen “Parts” in 320 Articles, plus 9 technical Annexes, can roughly be divided into three major divisions. The first division, comprising Parts I-X of the Convention, is “territorial” in character. It redefines the spatial organisation of the ocean, and the rights and duties of States in each space. It closes some of the gaps left by the First and Second United Nations Conferences on the Law of the Sea (UNCLOS I, 1958; and UNCLOS II, 1960) by determining the limits of the territorial sea (12 nautical miles measured from the baselines), the contiguous zone (an additional 12 miles), the continental shelf (maximally, 350 miles from the baseline), and the high seas with its freedoms, much reduced in size by the expansion of national jurisdiction in ocean space. It creates three new types of ocean space: the Exclusive Economic Zone (200 miles, measured from the baselines), the archipelagic state, with its

⁴The Biodiversity Convention; the Climate Convention; Agenda 21; the Desertification Convention; the Programme of Action for Small Island Developing States; the Implementation Agreement on Straddling fish stock and highly migratory stocks; the Global Programme of Action on the prevention of pollution from land-based activities; the Programme of Action on Integrated Coastal Management; Habitat; the Social Summit;

archipelagic waters -- vast expanses of formerly high seas now enclosed by base lines linking the outermost islands and reefs of the state; and, perhaps most important for the future, the international sea-bed area -- "the Area" beyond the limits of national jurisdiction, which is governed by "the Authority" on the basis of the principle of the Common Heritage of Mankind.

Part XI, the centre piece of the Convention defines this regime with its combination of functional and territorial characteristics. "Territorial," in so far as "the Area" is a territory to be delimited by "boundaries" by the year 2004, ten years after the entry into force of the Convention. As the drawing of these boundaries is a very complicated task, it will be accomplished with the assistance of a Commission on the Limits of the Continental Shelf; "functional" in so far as the Authority exercises limited functions through exclusive rights (controlling and managing the exploration and exploitation of the mineral resources of the Area and related activities) which cohabit in the area with shared jurisdictions (scientific research) and with the rights of States in the Area (e.g., prospecting). The Area is reserved for exclusively peaceful purposes.

In the Convention, as adopted and signed by 117 States and 2 non-State entities in 1982, the Authority consisted of

- ◆ an *Assembly*, representing all States Parties, the supreme and policy-setting organ of the Authority,
- ◆ a *Council* of 36 carefully balanced members, elected on the combined principles of regional representation and interest representation -- the executive body of the Authority. It is advised and assisted by two Commissions of experts, the Economic Planning Commission and the

Legal and Technical Commission, of 15 members each.

- ◆ a *Secretariat*, headed by a Secretary-General, the Chief Executive Officer of the Authority;
- ◆ an *Enterprise*, the operational arm of the Authority which was directly to engage in exploration, mining, processing and marketing activities, on behalf of humankind as a whole, with particular consideration of the needs of poor countries. It was through this Enterprise that developing countries hoped to be able to participate in this high-tech activity, otherwise open only to the industrialised countries.

The exploration and exploitation of the manganese nodules was to be based on the so-called *parallel system*, meaning that it could be conducted, on the one hand, by the Enterprise, on the other, by States or companies on the basis of licences against payments of royalties to the Authority. A third mode of conducting business, although ardently advocated by a number of developing countries, was only sketchily indicated, and that is operation through *joint ventures*.

A review conference was to take place 15 years after the start of the first commercial mining operation, to assess whether the parallel system was functioning properly -- with the Enterprise keeping pace with the private sector, whether the Area was in fact used exclusively for peaceful purposes, and other fundamental issues. If there were failures, amendments would have to be made.

As the ratification process languished through the decade of the 'eighties and, furthermore, remained restricted to the developing countries, the Secretary-General of the United Nations initiated, in 1990, a process of "informal

consultations” on Part XI in an attempt “to make the Convention universally acceptable,” especially to those who had refused to sign it in 1982, led by the United States. The result was the “Implementation Agreement” of 1994, which entered into force, on a provisional basis, together with the Convention on November 16, 1994; then permanently, having received the necessary number of ratifications, in July, 1996.

The Agreement did not address the real problems: that, on the one hand, there would be no commercial nodule mining for the next 20 years; and that, on the other, science and technology were rapidly moving and new resources were being discovered for which the Convention and the Implementation Agreement did not provide any management regime.

The Authority was established in Jamaica on November 16, 1994, on the basis of the Implementation Agreement..

The third major division of the Convention consists of Part XII through XV. This division is distinctly nonterritorial. It deals with the marine environment as a whole; with marine scientific research and technology development transfer on a global, regional, and national basis, and with the peaceful settlement of disputes in a most comprehensive way.

Part XII contains what is still today the only existing comprehensive, universal, binding and enforceable international environmental law, covering the ocean environment globally, dealing with pollution from all sources, whether oceanic, atmospheric, or from land-based sources, and including pollution of all kinds, whether oil or industrial or agricultural wastes, chemicals or other hazardous substances. Environmental issues are subject to binding settlement

procedures, whether through the International Court of Justice, the International Tribunal for the Law of the Sea, Arbitration or Special Arbitration by technical experts. Enforcement is the responsibility of coastal States, flag States, and Port States. Port States are a new concept in international law and are beginning to play an increasingly important role in the enforcement of environmental and fisheries regulations

Part XII provides a framework, to be filled in by literally hundreds of geographically or functionally sectoral Conventions or Agreements, already in existence or yet to be created. Conventions either limited to a specific geographic region, or covering one specific pollutant.

Part XII thus is the mother of the great United Nations Conference on Environment and Development (UNCED, Rio de Janeiro, 1992) which could not have happened without it. All Conventions, Programmes, and Agreements emanating from UNCED, in turn, have important ocean components which now interact with the provisions of the Law of the Sea Conventions. The task before us now is to use all these instruments in such a manner that they reinforce one another in the process of building a better world order for the next century.

Part XIII creates a new regime for marine scientific research. This Part has three outstanding merits:

First of all, the Convention, in this Part and throughout, gives to science and technology the importance they need be given in modern governance systems. Many national Constitutions could learn from this perception. About one hundred of the 320 Articles of the Convention -- nearly one third -- touch in one way or another on science and science-based technology. Here again, it is not by chance

that the Law of the Sea is playing a pioneering role. Science and technology are today of fundamental importance for decision-making in all sectors. Economic development today is unthinkable without them. Suffice it to recall that between 85 and 90 percent of economic growth are due to science-based technological innovation, not to additional inputs of material or capital. But many countries are sluggish in recognizing that science and technology are not a luxury which they may begin to indulge in after satisfying their basic needs, but that they will be able to satisfy their basic needs only if they do something to close the science and technology gap, which is the worst of all development gaps.

It is the nature of the oceans that pushes science and technology into the foreground. Without marine science and technology we would be blatantly unable to explore, exploit, manage and conserve marine resources or to navigate safely or to protect our coasts. And it is the nature of the marine environment that forces us to recognize that this science must be interdisciplinary, integrating physical, chemical, biological and social sciences, and that it must be international, to cover the global dimension of the ocean and its interaction with the land and the atmosphere.

The second merit of this Part, following from this first, is its consistent emphasis on international cooperation, on bilateral, regional, and global levels. Cooperation, in fact, is made *mandatory*: States *shall* cooperate: not “States *should* or *might* cooperate.” Provisions of this kind have led one expert, Ambassador W. Christopher Pinto of Sri Lanka to postulate the emergence of a new international law of cooperation.

The third special merit of Part XIII of the Convention is that it establishes

that marine scientific research is “reserved for peaceful purposes.” -- a provision as interesting as those reserving the high seas and the international seabed Area for peaceful purposes. This, obviously will not deter the Pentagons of this world from continuing or even intensifying their marine scientific research for war purposes, but if read together with the emphasis on cooperation mentioned in the preceding paragraph, it follows that the more the new international law of cooperation is developed, the more marine scientific research will be applied and reserved for peaceful purposes. Marine scientific research is costly. It can be financed either by the Ministries of Defence or through international cooperation. What is financed through international cooperation will not be used for purposes of war making.

Part XIV, together with the original Part XI, provides the best available institutional framework for technology cooperation, development and “transfer”⁵ at the national, regional and global level. It makes it incumbent on the U.N. system as well as on donor States to assist developing countries to improve their scientific/technological infrastructures. At the regional level, it establishes centres for scientific/technological development and “transfer;” a provision that, thus far has not been implemented and whose time has come. At the global level the Convention assigns increasingly important roles to the “competent international

⁵ “Transfer” is set between quotation marks, because, in my opinion, it does not exist any more in the traditional sense. The nature of high technology is qualitatively different from that of traditional technology. It is based far more on software, on knowledge and information than on hardware, capital and material. It cannot be “bought”; it must be learned. The institutional implications of this change will be examined below.

organisations” -- FAO for fishing, IOC for marine scientific research, IMO for shipping; UNEP for the conservation of the Environment, ISBA (International Sea-bed Authority) for mineral mining -- are given additional and new responsibilities..

The system for the peaceful settlement of disputes designed in Part XV and annexes has been widely and rightly hailed as the most comprehensive and most binding system ever accepted by the international community. Its main merit is that it is not an optional protocol to be signed by States or not to be signed; it is an integral part of the Convention, and by becoming a party to this Convention, a State *eo ipso* accepts in advance binding third-party settlement of disputes That is a big step forward in the development of international law, peace, and security; and as the Secretary-General of the United Nations pointed out, this principle should be taken over by the United Nations as a whole.⁶ At the same time, Part XV is extremely flexible when it comes to the particular way or the particular forum which States may chose to settle their disputes. They are exhorted to settle them bilaterally through negotiation; if this fails, they may resort to conciliation which is not binding; this failing they may chose to submit their case to the International Court of Justice in the Hague or the newly established International Tribunal for the Law of the Sea in Hamburg, or to arbitration by an arbitral tribunal the rules for which are laid down in the Convention. or to “special arbitration” by a arbitral tribunal consisting, not of judges, but of experts, selected from lists to be kept by the “competent

⁶Boutros Boutros-Ghali, *An Agenda for Peace*, New York: United Nations, 1993.

international organisations” upon nomination by Governments. It is the first time that these organisations are involved in any way in the process of dispute settlement. Issues arising from the interpretation or implementation of Part XI (sea-bed mining) are to be dealt with by the Sea-bed Dispute Chamber of the International Tribunal. This is a part of the Tribunal which is of particular interest, because, in consideration of the nature of the disputes to be settled, it is not only States that have a standing in this Chamber, but non-State entities, such as mining companies, NGOs or even individuals as well..

Part XV, in a way, is the Part that draws the whole Conventional structure together and integrates it as a whole. The 21 Judges are elected by a meeting of the States Parties. Since the Judges are elected on staggered terms, one third to be renewed every years, this meeting takes place every third year. Its functions are limited to this election and to reviewing and adopting the budget for the Tribunal. Quite possibly, these functions should be extended in the future to reviewing and revising the Convention as a whole and including Part XI. It is in fact surprising that the Convention made no provision for regular review conferences which normally are part of any modern Convention and are essential to keep Conventions alive and able to respond to rapidly changing circumstances. Since the Review Conference for Pat XI has been abolished, it would be opportune to reinstate it as part of the review process of the whole Convention.

The final Parts (XVI and XVII) contain mostly routine matters such as provisions for the entry into force of the Convention; amendments; etc., and provisional measures. One provision, however should be mentioned in particular, and that is para.6 of Article 311, which states that States Parties agree that there

shall be no amendments to the basic principle relating to the common heritage of mankind set forth in article 136, and that they shall not be party to any agreement in derogation thereof. This paragraph elevates the principle of the Common Heritage of Mankind to the status of *jus cogens* which indeed it should have and which will be important for the future.

Process, not Product

Thus, there is plenty in this Convention that is new: Concepts for the Twenty-first century.. At the same time we must recognize that there really is never anything that is totally new, without ancestry, without precedent. Even the greatest innovation emerges from a process generated by the environment in which it takes place and which, in turn it is bound to modify in such a way that it will generate innovation again. A legal order, embodied in a Constitution, in this perspective is like a living organism. If it stopped interacting with its environment, it would be dead

Environmental concerns, undoubtedly were among the forces that generated and shaped UNCLOS III and the Convention it created. But during the past twenty years these environmental concerns have grown and matured for two interrelated and interacting reasons. First of all the natural and social environment was deteriorating at an alarming rate. Pollution in coastal areas and enclosed seas took on dangerous dimensions; resources were declining; poverty was increasing, and the differences between rich and poor, between nations and within nations was growing. At the same time, science and technology progressed; our understanding of ocean processes improved; and what is even more important:

During the two decades, from 1972 (Stockholm Conference on the Human Environment) to 1992 (Rio Conference on Environment and Development) the international community learned that environmental and socio-economic concerns were closely interrelated and had to be considered as a whole.. There can be no conflict between socio-economic development and the protection and conservation of the environment. Both must go together, or neither one of them will go. That is the gist of the Report of the World Commission on Environment and Development, *Our Common Future* (1987). It was spelled out in greater detail by the Rio Conference, in particular by Agenda 21, our agenda for the 21st century which provides precise guidelines for the kind of *Institutions* we will need to implement the new legal order and the new insights on environment and development we have gained during the last twenty years.

UNCLOS + UNCED = UNCLOSED

Unclosed means open. The interaction between UNCLOS and UNCED has generated an open process of development and fundamental transformation that will affect all of us, from the level of our local communities to the level of national government, to that of regional cooperation and development and the global level of the United nations.

The world's problems cannot be solved by designing institutions. They must be solved by people. People will design the institutions they think they need; and the kind of institutions they will build will depend on the kind of culture they were born into. But without building institutions, people would not be able to solve their problems, and if institutions are out of phase with the problems of the

real world, an “institutional gap” will open. The likely response of people to the appearance of an institutional gap is violence.

We have lived through a period of institutional gaps. The real world has gone through incredible dynamic changes during the past half century -- and institutions, both national and international have remained basically static and unchanged. But we have reached a point where the shapes of a new institutional order are becoming recognizable. Pieces of it are emerging here and there, filling the gaps.

Everything touched on in the preceding pages has institutional implications. We will now try to spell them out.

PEOPLE AND INTEGRATED COASTAL MANAGEMENT

The new guide lines can be summed up under four headings: The institutional framework must be (i) *comprehensive*, that is, it must reach from the local community to the global level of the United Nations; (ii) it must be *consistent*, that is, regulation and decision-making processes and mechanisms at all levels of governance must be compatible; (iii) it must be *trans-sectoral* or multidisciplinary; and (iv) participational, bottom-up rather than top down.

Thus we begin at the level of the local community.

In many parts of the world, a new concept of “governance” is emerging: the concept of *co-management*.

Co-management is a response to the failure of regulation by central governments and the crisis of fisheries, entailing the social and cultural

disintegration of coastal communities. It also responds to the more general current trend towards *decentralization* and local cultural, and in many cases, ethnic autonomy. Co-management is a consequence of the “transparency of boundaries” between levels of governance described in *Our Common Future* that characterizes the emerging relationship between local-provincial-national Governments. It also establishes a new relationship between governmental and nongovernmental sectors. Where it blends with the concept of “community-based management” it also reflects the “transparency of the boundaries” between disciplines and Departments. It embodies a bottom-up approach.

A great number and variety of examples can be found in places as disparate as South Africa, the Caribbean, or Canada, in China, in Norway, Australia, . and the South Pacific. In some cases, e.g. Norway, the South Pacific and Japan, co-management has a very long history..

In South Africa co-management is evolving in the context of post-apartheid democratization.. Fishing and coastal zone policy forums, local and regional government forums, involving consultations between all “stake holders,” are being established at various levels through Reconstruction and Development Programmes (African National Congress, 1994).⁷ Co-management and community-based management are merged, providing a possible model through which South Africa can restructure the coastal zone equitably and sustainably.

The Nunavut Final Agreement, ratified by the Canadian Parliament in

⁷Richard Hasler, “Towards Political Ecologies of Scale: Conceptualizing Community-based Coastal and Fisheries Co-Management on the West Coast of South Africa,” *Ocean Yearbook*, Vol. 14, Chicago: University of Chicago Press, 1998.

1993, provides for the establishment of a complete co-management regime for Nunavut, the autonomous Inuit territory in North-West Canada.

One beneficial aspect of co-management is greater involvement of fishers in scientific research providing a broader base of information and knowledge.⁸

Until land-claims agreements installed meaningful co-management structures, traditional knowledge had little chance for expression in government policy. Now that aboriginal people have equal representation on management boards, traditional knowledge and beliefs are incorporated into management decisions.⁹

The reverse side of the coin is that it makes science available to fishing communities so that they can use it as a tool along with their indigenous knowledge.

The same applies to technology. Co-management provides the best institutional framework for the blending of native skills and indigenous technologies, contributed by the local community, and high technology which may be provided by the central government. The blending of traditional wisdom and high technology (especially microelectronics and genetic engineering) into “eco-technologies” is an important contribution to sustainable development in coastal areas.

⁸Svein Jentoft and Knut H. Mikalsen, “Regulating Fjord Fisheries: Folk Management or Interest Group Politics?” in Christopher L. Dyer and James R. McGoodwin, *Folk Management in the World's Fisheries: Lessons for Modern Fisheries Management*, Niwot: University Press of Colorado, 1994.

⁹Harold E. Welch, “Marine Conservation in the Canadian Arctic: Regional Overview” in *Canadian Ocean Assessment*, op.cit.

Co-management, of course, is not a panacea. Its applicability is limited. Its take-off point is rather high on the scale of social development. It presupposes the existence of infrastructure -- cooperatives, village councils, organised user groups, etc. Poor coastal villages in poor countries do not have this sort of infrastructure, and the task of making them active partners in integrated coastal management is daunting. And yet: if integrated coastal management does not include them, integrated coastal management is neither integrated nor sustainable. The upgrading of livelihoods in poor coastal villages is essential also if migration of the poorest people to the shanty towns of coastal Megacities is to be halted and further urban sprawl, entailing further degradation of the coastal environment and exposing swelling masses of poor to the hazards of natural and anthropogenic catastrophes, are to be prevented. Ways must be found to include the inhabitants both of poor villages and coastal megacities in integrated coastal management.

The Nation

Also at the national level institutional arrangements will vary, depending on existing infrastructure -- e.g., whether federal, confederate or unitary, democratic, monarchic or dictatorial, small or large, continental, insular or archipelagic; and it also will depend on the stage of economic development, on culture, etc. but there are at least two features which all national ocean regimes will have in common:

There must be effective linkages between the coastal community, and the

the national government. In small countries, this linkage will be direct; in large, or federal or confederate states, there will be an intermediate level: that of the province, state, or *land*, with effective linkages both to the local community and to the national government

And, second, there must be effective linkages between all government departments or ministries involved one way or another in ocean affairs: and almost all departments or ministries are in fact involved.

Foreign Affairs is involved through legal affairs and treaty division as well as through international trade. And foreign aid and cooperation in ocean affairs;

Environment is responsible for the protection of the marine environment including marine protected areas;.

Transport has to regulate shipping, ports and harbours;

Tourism handles coastal tourism;

Agriculture, in many countries, regulates fisheries, while in some others there is a separate Department/Ministry for fisheries;

Energy and Resources or, in some countries, the Ministry for the Interior, is responsible for Offshore oil and gas as well as non-fuel minerals and metals;

Labour and Health are involved in labour and sanitary conditions on vessels and platforms;

Science & Technology, Education are of primary importance as they are responsible for building the scientific-technological infrastructure which are of crucial importance as a basis for ocean management and development;

Also the Department of Justice will have to be involved for the peaceful settlement of disputes; while

Defence regulates navies and coastguards and is responsible for surveillance, enforcement and maritime security.

The ocean related responsibilities of all these departments and ministries overlap and often conflict and the framing of a consistent and integrated oceans policy requires interdepartmental cooperation of a kind not achievable within the traditional sectoral structure of traditional governance.

Some countries -- e.g., France, India -- have tried to respond to the new challenge through the establishment of a new Ministry for the Ocean or Department for Ocean Development; but these attempts have not really been successful anywhere, since the traditional departments involved sectorally in ocean affairs were not willing anywhere "to yield turf." In France, the Ocean Ministry was abolished after a short trial period; in India, the functions of the Department for Ocean Development were restricted to activities which fell outside the responsibilities of the traditional ministries, i.e., developing programmes for Antarctic research and exploration and for deep sea-bed mining. All other ocean activities remained largely uncoordinated.

Other States have developed policy integration through inter-ministerial councils under the responsibility of a lead agency or, frequently, of the Prime Minister or his deputy. This appears to be the more promising route, although, by itself, it does not ensure "co-management," or the input from the "village circle."

The most complete national institutional framework for integrated ocean and coastal management is that designed by the Netherlands for the administration of the Dutch part of the North Sea.

The Dutch model provides for wide participation and an effective

decision-making system linking government, research institutions and interest groups. At the political level, there is a Board of Ministers under the Chairmanship of the Prime Minister. The Board is advised by a Parliamentary Commission on ocean affairs as well as by a Nongovernmental Advisory Council comprising industry and science. The work of these advisory bodies is coordinated by the Minister of Transport and Public Works. At the bureaucratic level there is an Interdepartmental Commission, composed of senior officials of thirteen departments and usually chaired by a former Prime Minister. It is its responsibility to prepare the work for the Ministerial Board. Decisions by the Board are made by consensus.

The Netherlands is not a very large country. Coastal management, including the management of the dikes to control flooding, is of primary importance for the whole country.

These new structures keep evolving, changing in details, adapting to local and national needs and conditions, and there are already a great many examples, in all parts of the world.

A great deal of training and education, of a new, genuinely interdisciplinary type, is required to make the system work. In fact, a new type of civil servant is required, not narrowly specialised in the "sector" of this or that Government Department, but at home both in the natural and the social sciences and all major uses of the seas and oceans. Such persons must be on the staff of every one of the Ministries and Departments involved, to make inter-ministerial cooperation effective.

The Region

The Regional Seas Programme provides the most comprehensive institutional framework for regional cooperation in the seas and oceans. Initiated by UNEP following the Stockholm Conference on the Human Environment, it was one of the success stories of the United Nations system.

However, it necessarily reflected the sectoral approach which still prevailed in the early 'seventies. Stockholm generated the establishment of sectoral Ministries of the Environment at the national level, the Regional Seas Programme for the Protection of the Environment at the regional level, and UNEP, as a sectoral programme, at the global level. Between 1972 (Stockholm) and 1992 (Rio) global awareness moved from a sectoral to a comprehensive approach, from the protection of the environment to sustainable development.

This change has a number of institutional implications which the parties to Regional Seas Conventions, Protocols, and Action Plans have now to face. A most promising beginning has already been made with the revision of the Barcelona Convention and Action Plan in 1995.

The updating and restructuring of Regional Seas Programmes is absolutely essential, not only to save that useful Programme by itself, not only for the implementation of the Law of the Sea Convention, but of all the post-UNCED Conventions and action programmes as well as for the strengthening of regional security, including economic and environmental security. All these new instruments call for and rely on regional cooperation and organisation as an essential element: whether one looks at the Climate or Biodiversity Conventions, Agenda 21, the Barbados Action Plan for Small Island Developing States; the

Nordwijk recommendations on integrated coastal management, the agreement on straddling stocks and highly migratory stocks, the Global Plan of Action on Protection of the Marine Environment from Land-based Activities, or the Secretary-Generals Agendas for Peace and for Development.

The restructuring of Regional Seas Programmes must be based on the same principles as the structuring of national and local governance: Comprehensiveness, consistency, interdisciplinarity, and participation. If there is a mismatch between the various levels of governance, they cannot properly interact, and compatibility between rules and regulations at the national and regional level is impossible.

The change from a sectoral to a comprehensive approach, the new tasks arising from the implementation of Chapter 17 (and others) of Agenda 21, the Climate and Biodiversity Conventions and the Global Programme of Action, as well as the new emphasis on integrated coastal and ocean management, clearly *broadens the mandate of the Conventions*. This mandate now must cover all peaceful uses of the regional sea, including fisheries management, surveillance and enforcement; shipping, minerals and offshore oil, as well as coastal management, tourism, port management, etc.

This does not mean that UNEP's Regional Seas Programme should try to duplicate what other organisations, such as FAO, IOC, UNDP, etc., are already doing in the region. It means that a framework has to be established where all such organisations, including also regional development banks and UN Regional Commissions as well as science, industry and the NGO sector can cooperate.

UNEP has already begun to create such an institutional framework for the

implementation of the Global Programme of Action on Protection of the Marine Environment from Land-based Activities. Assuming this new responsibility, UNEP has clearly accepted a broadening of its mandate and recognized the need of an institutional framework including “partner organisations” both within the intergovernmental and the nongovernmental sector..

Another important development has been the revision of the Barcelona Convention and the Mediterranean Action Plan, which also recognized the need to update the broaden the mandate and, consequently, the institutional framework, since functions and structures must evolve together.

Four concrete aspects of this evolution, generated by the UNCLOS process and likely to contribute to the shape of ocean governance and the further evolution of the law of the sea in the twenty-first century, should be noted.

- ◆ The new concept of *water management*;
- ◆ the creation of *regional commissions on sustainable development*;
- ◆ the creation of *regional systems for technology cooperation and “transfer”*;
- ◆ the integration of human security and sustainable development in the regional institutional framework

Basically, it was the preoccupation with pollution from land-based activities that led to the new concept -- long overdue -- of integrated water management, including both sea-water and fresh-water systems..

Fresh-water and sea-water systems in the coastal zone interact. River-borne pollution from land-based activities impact on the marine environment. Desalinated sea-water is making a increasingly important contribution to the

fresh-water supply especially in arid regions where water scarcity has led to illness, conflict, and the breakdown of regional security. The depletion of underground aquifers has induced subsidence, sea level rise and coastal erosion. Thus the traditional institutional separation between fresh-water and sea-water systems does not respond any more to the needs of coastal management. The recent reorganisation of divisions for integrated water management within UNEP, UNDP, the World Bank and the Global Environment Facility (GEF) is a promising first step in this direction and will affect decision-making processes at local, national, and regional levels.

Regional Commissions on Sustainable Development

The establishment of Regional Commissions on Sustainable Development is desirable for a number of reasons.

The United Nations Commission on Sustainable Development is very limited in its means, while its tasks and responsibilities for the implementation of Agenda 21 are very comprehensive. If it could decentralise its operations, relying on increased activities at the regional level, this would enhance its efficiency. Regional Commissions with appropriate linkages to the U.N. Commission, would ensure *coherence between regional and global policies as well as between regional and national sustainable development policies.*

The Mediterranean countries, parties to the Barcelona Convention, have *taken the first bold step in establishing such a Commission*

This Commission was established in 1995, in accordance with the recommendation of the Tunis Ministerial Conference, held in November 1994.

The composition of this Commission is unusual, reflecting new trends that will take us into the next century. There are 36 members. 21 of these represent the Contracting Parties to the Barcelona Convention. The remaining 15 represent local authorities, socio-economic actors and nongovernmental organisations working in the fields of environment and sustainable development.

Each Contracting Party to the Barcelona Convention shall be represented by one high-level representative (total 21), who may be accompanied by such alternates and advisers as may be required, in order to ensure interdisciplinary participation of relevant ministerial bodies of the Contracting Parties (e.g., ministries of environment, tourism, economy, development, industry, finance, energy, etc.).

Each of the three categories mentioned in section C.5 of the text of the Terms of Reference, i.e., local authorities, socio-economic actors and nongovernmental organisations, shall be represented by five representatives (total 15) and an equal number of alternates, to be selected by the meeting of the Contracting Parties.

*All 36 members shall participate in the Commission on an equal footing.*¹⁰

The first of these 3 quoted paragraphs is particularly interesting because it departs from the UNEP tradition of having States represented by their Ministers for the Environment. The representative has to be “high-level” but he may be any “high-level” Minister. The paragraph stresses the need for interdisciplinary participation of relevant ministerial bodies of the Contracting Parties.

The second paragraph is of special interest because it provides the necessary linkage to local “grass-roots” constituencies, who will make the

¹⁰UNEP(OCA)/MED IG>8/CRP/9, paragraphs (a), 1-3

nominations.. The third paragraph is perhaps the most important one. It treats governments and nongovernmental entities as equals. It recognizes the ongoing changing relationship between States and “civil society.” It reflects the ongoing transformation of the concept of sovereignty.

The establishment of the Mediterranean Commission on Sustainable Development is a bold step forward. Its structure and functions should be carefully studied by the Contracting Parties to all other Regional Seas Programmes..

Institutional responses to these first two new developments have already been forthcoming, and all we need to do is to build on them.

With regard to the following two developments -- the needs are there, and they are universally recognized; but the institutional responses are still on the drawing board.

Technology Cooperation

The Law of the Sea Convention as well as each one of the post-UNCED Conventions, Agreements and Programmes recognize the fundamental importance of technology cooperation and technology sharing if poor countries are to fulfil their responsibilities and enjoy their rights under these new instruments. This recognition is progressive, gaining strength. The provisions in the new Conventions impose greater obligations on the industrialized States than the Law of the Sea Convention..

The weakness of the system lies in the fact that *each one* of the Conventions, Agreements and Programmes has *its own* provisions for technology

cooperation and sharing as each one attempts to create its own regime, at national, regional and global levels.

This obviously is a colossal waste, implying, more than a duplication, a *multiplication of efforts* -- especially considering that the technologies involved are largely the same.

If now we see the emergence of *comprehensive regimes*, responsible for the implementation of *all* the new instruments at the regional level, it becomes logical to think in terms of setting up one single system of technology cooperation serving the needs of *all* the Conventions, Agreements and Programmes in the region. Obviously this would be more cost-effective, and far more could be done with far less.

To be cost-effective, they should create synergisms between public and private investments at the regional level. To be productive, they should be based on the organisational and managerial concepts of the most advanced enterprises of *high-tech* Research and Development enterprises.

Among the industrialized countries there are models for this kind of system. In Europe, EUREKA is an excellent and very simple model, flexible, decentralised, and cost-effective. It generated billions of dollars of investments in R&D in high technologies..

New forms of cooperation between the private and the public sector at the international level -- not "privatisation" -- offers the possibility of a synthesis between the necessarily more narrow financial, short-range interests of the private sector, whose business is business, and the wider, social and environmental, long-term concerns and responsibilities of the State.

For developing countries, co-development of technology has a number of special advantages: It has a built-in component of *training*. Technicians from developing countries, selected for participation in joint R&D, learn “on the job”; secondly, technologies developed jointly need not be “adapted” subsequently for use in the developing country, but is from the outset designed for such use; thirdly, there is no problem with regard to “intellectual property rights”. Technologies developed jointly are owned jointly, and there is already a large literature on how such rights are managed. Technology co-development will contribute to the broadening and opening of the notion of “intellectual property” which is inevitable in any case.

The establishment of such systems of technology-codevelopment within the scope of revitalized Regional Seas Programmes would be in full accord with the Programme for the Further Implementation of Agenda 21 adopted by the Special Session of the UN General Assembly, 23-27 June 1997 .Paragraph 92 of this Programme reads: *Governments should create a legal and policy framework that is conducive to technology-related private sector investments and long-term sustainable development objectives. Governments and international development institutions should continue to play a key role in establishing public-private partnerships, within and between developed and developing countries and countries with economies in transition. Such partnerships are essential for linking the advantages of the private sector -- access to finance and technology, managerial efficiency, entrepreneurial experience and engineering expertise -- with the capacity of Governments to create a policy environment that is conducive to technology-related private sector investments and long-term sustainable development objectives.*

Paragraph 93 recommends the creation of centres for the transfer of technology at various levels, including the regional level. Paragraph 95 stresses the importance of taking appropriate measures to strengthen South-South cooperation for technology transfer and capacity-building.

Regional Security

The U.N. Secretary General's *Agenda for Peace* has begun to draw attention to the need for an integration of political, economic, and environmental security. The *Agenda* also stresses the importance of *regional cooperation* in this process and its potential contribution to enhancing preventive diplomacy, peacekeeping, peacemaking and post-conflict peacebuilding. Regional organisations qualified to participate in this process

could include treaty-based organizations, whether created before or after the founding of the United Nations, regional organizations for mutual security and defence, organizations for general regional development or for cooperation on a particular economic topic or function, and groups created to deal with a specific political economic or social issue of current concern.

The organisations created by the Regional Seas Programmes and Conventions belong to these categories.

The Agenda further states:

Under the Charter, the Security Council has and will continue to have primary responsibility for maintaining international peace and security but regional action as a matter of decentralization, delegation, and cooperation with the United Nations efforts could not only lighten the burden of the Council but also contribute to a deeper sense of participation, consensus and democratization in international affairs.

But Regional Seas Programmes have not yet taken up this challenge and opportunity. The Year of the Oceans; and the process, already initiated, of revitalizing the Regional Seas Programmes provides an excellent occasion for doing so.

A number of elements on which one could build are already in place. *Joint surveillance and enforcement* is already implemented in the South Pacific as well as in the Eastern Caribbean. This is one way of promoting economic and environmental security in the regional sea..

The structures evolving through the process of revitalizing the Regional Seas Programmes can be utilized in a similar way.

The broadly interdisciplinary, Inter-ministerial approach already adopted by the Mediterranean States for the composition of the Mediterranean Commission on Sustainable Development should be extended also to the composition of the Bureau, that is, the Executive body of the Regional Seas System. At present, the Bureau is still composed of the Ministers of the Environment. This is out of phase with the ongoing development. The Bureau should be attended “by a high-level Minister” who, in each case, should be from the Ministry responsible for decisions on the issue under consideration. Thus, if a decision has to be taken on a fisheries problem, it should be the Ministers of Agriculture/Fisheries who should compose the Bureau and take the required decision. If an issue on science and technology is on the agenda, it should be the Ministers of Science and Technology, and *if it is an issue of regional security or of naval cooperation for peaceful purposes, it should be the Ministers of Defence who should compose the Bureau.* They could be accompanied by the Ministers of Foreign Affairs, or the other way ‘round. They could serve the purpose

of UN peacekeeping in cases of armed conflict requiring military responses, through the appropriate chain of command under the Secretary-General of the United Nations. In the absence of armed conflict, naval regional cooperation could extend to joint surveillance and enforcement and to peaceful humanitarian activities such as search and rescue, disaster relief, or hydrological surveys, mapping, and other forms of oceanographic research. In institutional terms this is a simple extension and adaptation of a process already in course.

Not all regional seas programmes will be able to move in this direction at the same pace. Power-political constellations may be impediments requiring less or more time to overcome. But the time has come to put the issue on the agenda for consideration for the next century.

Regional seas should be declared, wherever possible, as nuclear-free zones. This is another way of integrating environmental and political security and interpreting, developing and implementing the new principle, enshrined in the Law of the Sea Convention (Article 88), reserving the High Seas for peaceful purposes. This also includes the Exclusive Economic Zones. Promising beginnings have been made already with the Declaration on the Indian Ocean as a Zone of Peace, the Antarctic Treaty, the Treaty of Tlatelolco establishing a Latin American Nuclear-Free Zone (LANFZ) -- which should be extended to the Caribbean -- and the Treaty of Rarotonga, with its Protocols. The Baltic, the Arctic, the Mediterranean, the Caribbean the Indian Ocean, the Asian Seas might be good candidates for extending

the application of this concept¹¹.

Regional settlement of dispute, finally, could make another important contribution to regional security. The system for the peaceful settlement of disputes contained in Part XV and Annexes V-VIII could be utilized for this purpose. Regional Arbitration or Regional Special Arbitration Tribunals could be constituted under Annexes VII and VIII.

Regional Seas thus may play a most interesting and complex role in the evolution of international law and organisation in the next century.

Physiologically, they approximate "large eco-systems" which form an ideal basis for ocean management. They generate an environment-driven communality of interests among coastal States. But environmental concerns must now be integrated into sustainable development concerns.

Regional Seas are an essential element of linkage between national and global levels of ocean policy making.

Regional Seas are of basic importance for the implementation of all UNCED and post-UNCED Conventions, Agreements and Programmes as well as of the U.N. Convention on the Law of the Sea.

Regional Seas regimes overlap with the regimes of continental organisations. The Mediterranean Regional Sea regime thus includes the European Union, the

¹¹ See Ramon Lopez Reyes, "Maritime Zones of Peace: A Regime of Peace on the Seas," in *Peace in the Oceans: Ocean Governance and the Agenda for Peace*, Paris: UNESCO, Intergovernmental Oceanographic Commission technical series, 1997.

Organisation of African States¹², the Regional Commissions of the United Nations for Europe, Africa and West Asia together with their Development Banks. Regional Seas are bridges facilitating intercontinental planning and policy making.

The revitalisation of the Regional Seas Programme thus is priority issue. The establishment of technology cooperation systems, of regional commissions on sustainable development, and of institutional arrangements to integrate peaceful uses and regional security concerns would be essential components of this revitalization process.

The United Nations

We now are moving to the global level, the level of the United Nations. Here, too, we can build on what is already in course. What is needed is the vision of an architectural design, putting it all together. What is needed, of course, is political will. The building of an institutional framework for the global ocean regime may be model for, and part of the restructuring of the United Nations for the next century.

To bring together all the parts discussed in the previous pages four developments should be considered:

- ◆ The establishment of a forum where States and non-State entities can discuss the closely interrelated problems of ocean space as a whole (“the “Ocean Assembly”);
- ◆ the ocean policy-integration of all Specialized Agencies and Programmes (“

¹² “Economic Integration organisations,” which have a standing in all new convention regimes.

the competent international organisations” referred to throughout the Law of the Sea Convention);

- ◆ The restructuring of the Trusteeship Council for the new mandate of watching over the evolution of the Common Heritage concept;
- ◆ the revitalization of the International Sea-bed Authority.

Policy Integration: The Ocean Assembly

As emphasized in the Report of the Secretary-General of the United Nations¹³ it is only the General Assembly, with its universal membership that has the capability of dealing with all the closely interrelated problems of ocean space, including those arising from the interactions of various Convention regimes. The disadvantage of the General Assembly, however, is that it cannot possibly devote sufficient time to these problems which would require several weeks, at least every second year.

To solve this problem, the General Assembly should establish a Committee of the Whole to devote the time needed for the making of an integrated ocean policy. Representatives of the upgraded Regional Seas Programmes, the Specialized Agencies of the UN system with ocean-related mandates, as well as the nongovernmental sector should participate in the sessions of this Committee of the Whole -- a sort of “Ocean Assembly of the United Nations,” meeting every second year. The integrated policy should be prepared by DOALOS in cooperation with the CSD.

¹³ Doc.A/51/645

Policy Integration: Specialized Agencies and Programmes

In analogy to what happens at the national level where almost all Government Ministries are involved in one way or another in ocean affairs, and ways have to be found to harmonize and integrate their overlapping and often conflicting policies, almost all Specialized Agencies and Programmes of the United Nations are involved in one way or another in ocean affairs. The International Maritime Organisation (IMO), the Intergovernmental Oceanographic Commission (IOC) and the International Sea-bed Authority (ISBA) are exclusively devoted to ocean affairs (IMO for shipping; IOC for marine sciences, ISBA¹⁴ for sea-bed mining), while UNESCO, FAO, and UNEP have a broader mandate including divisions for ocean affairs (UNESCO for marine sciences, culture and education; FAO for fisheries and aquaculture; UNEP for Regional Seas and marine environment) and others are otherwise involved with the oceans, such as the World Meteorological Organisation (WMO) with ocean-atmosphere interaction and its implications; the International Atomic Energy Agency (IAEA) for nuclear marine pollution; the United Nations Industrial Development Organisation (UNIDO), with industrial marine technology; the International Labour Organization (ILO) for the protection of maritime workers; the World Health Organisation (WHO) for ocean-related health problems; etc.

Streamlining of the Agencies and Programmes for cost-effectiveness, elimination of overlaps and harmonisation of policies has long been on the agenda of the United Nations and has been entrusted to the Administrative Committee on

¹⁴ ISBA is not a Specialized Agency but an independent intergovernmental Treaty-created body with “observer status” at the UN.

Coordination (ACC). In the wake of UNCED, the Secretary-General established a subcommittee of the ACC to deal specifically with the ocean-related policies and activities of the Agencies and Programmes, the ACC Subcommittee on Oceans and Coastal Areas, with its Secretariat within the IOC. Progress thus far has been disappointing. It is in fact doubtful whether policies can be integrated at the inter-Secretariat level. It is only at the level of the General Assembly that an integrated ocean policy can be framed, and this policy, then, should become the basis for the efforts of the ACC Subcommittee on Oceans and Coastal Areas..

A New Trusteeship Council

In his address to the General Assembly, the Minister of Foreign Affairs of Malta proposed that the Trusteeship Council, which had practically completed its task of decolonialization, should be dedicated to a great new task: It should become the guardian of the principle of the Common Heritage of Mankind -- not only in the International Sea-bed, not only in the oceans, but as applicable to "the global commons" in general, including atmosphere, outer space and the Antarctic. He elaborated his proposal further in his address to a workshop, "The United Nations: Second Generation," held in Malta in October 1994, under the auspices of the International Ocean Institute, the Foundation for International Studies, and the Ministry of Foreign Affairs of Malta.

Recently this proposal has been endorsed by the Secretary-General of the United Nations. In his Report to the General Assembly of the United Nations (document A/51/950), Mr. Cofi Anan, said

Member States appear to have decided to retain the Trusteeship Council. The

Secretary-General proposes therefore *that it be reconstituted as the forum through which Member States exercise their collective trusteeship for the integrity of the global environment and common areas such as the oceans, atmosphere and outer space. At the same time, it should serve to link the United Nations and civil society in addressing these areas of global concern, which require the active contribution of public, private and voluntary sectors. [Emphasis added]*

The International Sea-Bed Authority

The last, not least, new piece in the institutional framework at the global level is the International Sea-bed Authority, based on Part XI of the Law of the Sea Convention as modified by the "Implementation Agreement" adopted by the General Assembly in July 1994.

The International Sea-bed Authority was established and inaugurated in Jamaica on November 16, 1994. Its governing bodies have held three Plenary sessions (1995, 1996, 1997).

The difficulties the Authority has to face are of some magnitude.

Since manganese nodule mining is not likely to take place for the next twenty years, one might say, Who cares about the Sea-bed Authority! We might as well close it down! . This, however, would be a serious set-back The Sea-bed Authority is the only existing institutional embodiment of the fundamentally important principle of the Common Heritage of Mankind. If the Authority is allowed to fail and disappear, the Common Heritage of Mankind reverts to a status of "disembodiedness." The new Trusteeship Council would be poorer if, in practical application, the Common Heritage principle were allowed to fail.

And there is yet another reason why the International Sea-bed Authority is important. . Its disappearance would leave a gap among the existing "competent

international organisations" dealing with the peaceful uses of ocean space and resources. . The International Sea-bed Authority is the only existing global organisation to deal with the utilization of the nonliving resources of the oceans, and it is needed to fulfil this function.

To do this effectively, however, it will have to be reconceptualized, based on the experience of the last two decades and looking forward to the next century.

Two developments should be noted: On the one hand, manganese nodule mining is not forthcoming, for a variety of economic, technological, environmental, and political reasons. On the other hand, new discoveries have changed interests in the deep-sea panorama. Taken together, these two developments have made large parts of Part XI as well as the Implementation Agreement obsolete

Article 162.2.(o)(ii) provides that "Rules, regulations and procedures for the exploration for and exploitation of any resource other than polymetallic nodules shall be adopted within three years from the date of a request to the Authority by any of its members to adopt such rules, regulations and procedures in respect of such resources.." ¹⁵ It is to be hoped that some Delegations will take up this Paragraph and enable the Authority to look at resources other than the manganese nodules and to keep pace with scientific and technological change. The Authority has the right, and the responsibility, to engage in marine scientific research and to protect the

¹⁵ The Implementation Agreement appears to limit the application of this provision to matters specified in Sections 2 (The Enterprise), 5 (Transfer of Technology), 6 (Production Policy), 7 (Economic Assistance) and 8 (Financial Terms of Contract). This would not include Resources other than manganese nodules. However, there is no statement to the effect that the provision regarding other resources "shall not apply."

living resources, including the genetic resources, of the deep sea-bed. A long-term cooperative undertaking with the technological/scientific commission of the Secretariat of the Biodiversity Convention, to test and upgrade technology, monitor its environmental impact, and train scientists/technologists and managers from developing countries would constitute the core of an agenda that would make the Authority useful to the international community and, in particular, to developing countries.

The methane hydrates of the deep sea-bed, on which a great deal of international attention is now focussing, both because of their economic potential as an energy source for the next century and because of the potential danger they pose as greenhouse gases, are another resource, clearly part of the Common Heritage of Mankind, for whose exploration and exploitation the Authority ought to make rules and regulations. International cooperation in the development of these new resources would be beneficial to all.

Secondly, now that the initial establishment tasks have been fulfilled, ample time should be reserved for a general debate on the future of the Authority. This might be an essential contribution to a new vision of the Authority, to bring it into line with more recent developments such as the climate and biodiversity conventions to which deep sea-bed research could make important contributions. The Delegations should also have the opportunity, during special hearings, to hear from the scientific community and the nongovernmental sector. NGOs, especially those with competence on the environmental impact of sea-bed mining and on the interactions of the Authority's sea-bed mining regime and the regime established by the Biodiversity Convention, could make a useful contribution to the debate.

Thirdly, to maintain the dynamism of the system, enabling it to keep adapting in a rapidly changing world, the mandate of the Meetings of States Parties to the Law of the Sea Convention should be broadened, and every second of these meetings (every six years) should be constituted as a Review Conference of this Convention, including Part XI and the Implementation Agreement

In conclusion...

What we have tried to present in these pages, is a comprehensive, consistent, participational, and equitable system of ocean governance, reaching from the local community to the United Nations.

What can *you* do, during this Year of the Ocean to bring the importance of the oceans, of sustainable ocean development and equitable ocean governance, to the attention of your community, of your country, of your children, whose wellbeing will largely depend on the health of the ocean?

- ◆ Are you aware that there is an enormous amount of beautiful, grand, mythology, of poetry and music, of painting and dancing, devoted to the oceans, in all cultures of the world, old and new? If you are artistically inclined, you might take initiatives to have some of this performed or exhibited during this year of the ocean. Nothing can be more inspiring.
- ◆ If you have children in school or on a school board, you might see to it that appropriate action is taken to inform the children and let them participate in the celebrations, for instance, through special lectures, films, projects,

simulations.

- ◆ If you are professionally involved in any activity relating to ocean uses -- as a fisher, sailor, miner, scientist or marine technologist or engineer, you might see to it that work is done in accordance with highest environmental standards and best practices.
- ◆ As a citizen, you might avoid, and assist others to avoid wastefulness and pollution. If you live in a coastal community, you might help in promoting a sound ocean policy by establishing a local marine council or co-management council for citizen participation. You might write letters to the Editor of your local paper, promoting the establishment of a marine protected area; you might write to your Member of Parliament, who always likes to hear from you, and urge him to press for the ratification and implementation of the Law of the Sea Convention and all the related Conventions, Agreements, Codes of Conduct and Action Programmes, and for the required domestic legislation and institutional infrastructure.

There is indeed a lot you can do during this Year of the Ocean. Help us build a *constituency for the ocean*. The right to a clean, safe and sane environment, the right to development, and the right to human security are fundamental human rights. In promoting them in the oceans, which cover three-fourth of our planet, you are promoting your own health, wellbeing, security and happiness, and those of your children.