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More than 5,000 delegates and observers, representing 148 nations, met in Caracas from June to August, 1974, to draft a treaty governing use of the seas.[1] This Third United Nations Conference on the Law of the Sea was the largest such conference in history, and hopes were high that agreement on law of the sea would lay the foundation for a new world order.

In 1604 Hugo Grotius wrote that the seas were free to all, and this principle has survived until today. But the seas themselves have not survived so intact. Though the oceans cover more than seventy percent of the globe's surface, their capacity to serve as the sink for 20th century earth is not without limit. Life on land depends on life in the sea.

> If, however, they [the oceans] continue to be unmanaged, or mismanaged, as they are today, developmental activities in the oceans and on the continental shelves could well kill biological life in the "primary pump" of the planet, whose marine organisms supply 70 percent of the world's oxygen. We do not know what this would mean for the world. According to some biologists, it would mean the end of all life on earth. At the present rate of going this *could* happen early in the next century.[2]

Marine pollution was to have been an important issue at Caracas. The fifth term of reference of the Conference was "The preserva-

1. Taiwan and North Vietnam were not represented.
2. Johnson, *Will the Law Be For—Or Against—the Sea?*, 8 VISTA 16 (June, 1973).

tion of the marine environment (including, *inter alia*, the prevention of pollution) and scientific research."[3] But marine pollution was never treated as anything more than a subsidiary issue.

Various draft texts were prepared by Subcommitte III of the Seabed Committee. These drafts were to form the basis for international agreement on the preservation of the marine environment. However, the only consensus reached at Caracas was that marine pollution is an issue. Though the work of the conference continued in Geneva in March, 1975, with the possibility of future meetings in Vienna and again in Caracas, the likelihood of a meaningful international agreement on pollution control is remote. The nations that wish to act affirmatively will have to rely on existing conventions and general principles of international law.

Parts I through III of this article will define the scope of marine pollution problems and analyze the previous attempts made to deal with these problems. Parts IV and V will describe the efforts of the 1974 Law of the Sea Conference to achieve international agreement for dealing with marine pollution. In conclusion, alternatives to an international authority will be discussed.

I. MARINE POLLUTION

The definition of pollution most often cited in international literature is:

> Introduction by man, directly or indirectly, of substances of energy into the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources,

3. G.A. Res. 2749, 25 U.N. GAOR Supp. 28, at 24, U.N. Doc. A/8028 (1970). The Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, adopted by the General Assembly on December 17, 1970, includes the following:

> 11. With respect to activities in the area and acting in conformity with the international regime to be established, States shall take appropriate measures for and shall cooperate in the adoption and implementation of international rules, standards and procedures for, *inter alia*:
>
> (a) The prevention of pollution and contamination, and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment;
>
> (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.

For relevant discussions of some earlier developments see Butte, *Controlling Marine Pollution—World Task or National?*, 8 STAN. J. OF INT'L STUDIES 99 (1973); Slouka, *United Nations and the Deep Ocean: From Data to Norms*, 1 SYRACUSE J. OF INT'L L. & COM. 61 (1972).

> hazard to human health, hindrance to marine activities including fishing, impairing of quality for use of seawater and reduction of amenities.[4]

Oscar Schachter and Daniel Serwer have categorized pollutants under four headings: oil, chlorinated hydrocarbons, wastes discharged from coasts and wastes dumped from vessels.[5]

Oil: Recent estimates of the source of oil pollutants discharged annually into the oceans include: (1) 1.5 million tons from oil transport activities and offshore wells; and (2) 3 million tons from land-based sources.[6] The United States Environmental Protection Agency estimates oil pollution as follows: 4,930,000 tons are discharged annually, of which 67 percent comes from the disposal of used motor and industrial lubricating oil; 11 percent from normal tanker operation; 10 percent from improper bilge waste disposal; 2 percent from tanker accidents; 2 percent from off-shore spills and accidents.[7] Figures vary as to the amount of pollution caused by off-shore production. The Soviet Union estimates that 10 percent of all off-shore drilling production in the Caspian Sea escapes.[8] It thus appears that oil pollution is caused primarily by nations using the oceans as their litterboxes, rather than from production activities.

Chlorinated Hydrocarbons: This group includes DDT (dieldrin, endrin, and the polychlorinated biphenyls).[9] The pesticides enter the oceans by run-off from agricultural areas and from the atmosphere and are then carried to all corners of the world by the oceans' currents. DDT residues have even been found in penguins in the Antarctic. Scientists are unsure just how much DDT is in the oceans. One estimate has put the total amount of DDT that exists in the biosphere at one billion pounds. Schachter and Serwer state that since the half-life of DDT is between ten and fifty years, much of this one billion pounds can be expected to enter the oceans.

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4. Comprehensive Outline of the Scope of the Long-Term and Expanded Programme of Oceanic Exploration and Research, as approved by the Intergovernmental Oceanographic Commission (IOC) September 1969, and adopted by the Joint IMCO/FAO/UNESCO/WMO Group of Experts on the Scientific Aspects of Marine Pollution, U.N. Doc. A/7750 (1969).
5. Schachter & Serwer, *Marine Pollution Problems and Remedies*, 65 AM. J. INT'L L. 85 (1971).
6. *Id.* at 89.
7. Address by Quarles, Administrator, Environmental Protection Agency, before the American Association for the Advancement of Science, December 12, 1971.
8. BUTLER, THE SOVIET UNION AND THE LAW OF THE SEA 138-39 (1971).
9. A new group, the chloroethers, believed to be carcinogenic, have recently been found in domestic waters. ENVIRONMENTAL QUALITY—THE FOURTH ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENT QUALITY 189 (1973).

Wastes Discharged from Coasts: These wastes include sewage detergents, run-offs from agricultural areas and industrial wastes, which include "heavy metals, radioactive nuclides, inorganic chemicals and heated water." It is estimated that as much as 90 percent of the marine pollution emanates from land-based sources.

Wastes Dumped from Vessels: These wastes can be categorized as wastes which are dispersed and wastes which are containerized. There are no figures as to the containerized radioactive wastes. Of the dispersed wastes, 69,982,900 tons are dumped annually off the United States' coasts: 52,200,000 in dredging spoils, 4,682,000 in industrial wastes and 4,477,000 in sewage sludge.[10]

If the oceans stood still, perhaps pollution problems would not require the cooperation of all nations. Freedom to pollute the oceans is no longer a corollary of freedom of the seas. International standards must be set and methods of enforcement must be developed.

II. GENERAL INTERNATIONAL LAW: THE RIGHT AND THE DUTY OF STATES TO PREVENT POLLUTION

The Right and Power of Each State to Enact Anti-Pollution Measures

Lucius Caflisch and other scholars have hypothecated that each state has the right and power to enact anti-pollution measures with respect to: (1) the state's jurisdictional waters; (2) the exploration and exploitation of the continental shelf; and (3) marine vessels of its nationals on high seas.[11] This section will consider the scope of these rights and powers, and whether each state has a duty enforceable by other states or persons to enact such anti-pollution measures.

A primary source of a state's power to enact pollution control legislation is customary law. Customary law grows from claims put forth by one or more nations and the acknowledgment of those claims by other nations. Customary law acknowledges the exclusive use of the high seas for certain limited purposes over limited periods of time. Thus, nations can perform their military exercises without violating their obligation to respect freedom of the high seas. Out of customary law has evolved the principle that nations may explore and exploit the

10. EPA, OCEAN DISPOSAL OF BARGE-DELIVERED LIQUID AND SOLID WASTES FROM US COASTAL CITIES (1971).
11. Caflisch, *International Law and Ocean Pollution: The Present and the Future*, 8 BELGIUM REV. OF INT'L L. 1 (1972).

continental shelf, although the shelf lies beyond their national jurisdiction. This idea was first advanced by the United States in the Truman Proclamation in 1945. Similar claims to the continental shelf were soon made by other nations. This extension of jurisdiction has now won formal acceptance. The right of a coastal state to exercise its sovereignty over its continental shelf for the purpose of exploring the seabed and exploiting its natural resources was included in the Convention on the Continental Shelf.[12] In the North Sea Continental Shelf Cases,[13] the International Court of Justice recognized this right of the coastal states as "pre-existing or emergent customary law."[14]

Though the International Court of Justice only referred to the first three articles of the Convention on the Contiental Shelf, other concepts enunciated by the 1958 Geneva Conventions have formalized existing customary law.

Article 24 of the Convention on the Territorial Sea and Contiguous Zone (hereafter the Territorial Sea Convention) established that a coastal state's regulations are only operative within that state's territorial sea. Such regulations are limited by the duty to grant innocent passage, transit that is not "prejudicial to the peace, good order or security of the coastal state."[15] However, there has been no international consensus on the breadth of the territorial sea.

All seas not included in the "territorial waters or in the international waters of a state" are defined as "high seas" by the Convention on the High Seas.[16] A state may not subject the high seas to its jurisdiction nor may a state interfere with other nations' freedom of navigation.[17] But a state does have limited jurisdiction on the high seas with-

12. Four treaties were considered during the 1958 Conference on Law of the Sea which met at Geneva. The four Conventions that were adopted are: CONVENTION ON THE HIGH SEAS, 13 U.S.T. 231, T.I.A.S. No. 5200, 450 U.N.T.S. 82, 52 AM. J. INT'L L. 842 (1958); CONVENTION ON THE CONTINENTAL SHELF, 15 U.S.T. 471, T.I.A.S. No. 5578, 799 U.N.T.S. 311, 52 AM. J. INT'L L. 858 (1958); CONVENTION ON THE TERRITORIAL SEA AND THE CONTIGUOUS ZONE, 15 U.S.T. 1606, T.I.A.S. No. 5969, 599 U.N.T.S. 285, 52 AM. J. INT'L L. 834 (1958); CONVENTION ON FISHING AND CONSERVATION OF THE LIVING RESOURCES OF THE HIGH SEAS, 17 U.S.T. 138, T.I.A.S. No. 5969, 599 U.N.T.S. 285, 52 AM. J. INT'L L. 851 (1958).

13. Federal Republic of Germany v. Netherlands, Federal Republic of Germany v. Denmark (1969) I.C.J. 3; *digested and excerpted* at 63 AM. J. INT'L L. 591 (1969).

14. (1969) I.C.J. 42. *See also* Laylin, *Past, Present and Future Development of the Customary International Law of the Sea and Deep Seabed*, 5 INT'L LAWYER 444 (1972).

15. CONVENTION ON THE TERRITORIAL SEA AND THE CONTIGUOUS ZONE, *supra* note 12, at Article 1.

16. CONVENTION ON THE HIGH SEAS, *supra* note 12, at Article 1.

17. *Id.* at Article 2, reads: "The high seas being open to all nations, no state may validly purport to subject any part of them to its sovereignty. Freedom of the high seas . . . comprises, *inter alia* . . . (1) freedom of navigation.

in its contiguous zone. The contiguous zone is defined as twelve miles from the baseline from which the territorial sea is measured.[18] Article 24(1) of the Territorial Sea Convention provides that a coastal state may exercise its jurisdiction within this zone to "[p]revent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea" and to "[p]unish infringement of the above regulations committed within its territory or territorial sea."

The recent history of the oceans has been characterized as creeping jurisdiction. Many states have extended their territorial seas to twelve miles, or have used the contiguous zone concept to extend their sovereignty beyond the twelve mile limit. States have explained their actions on the grounds of conservation or protecting the environment. Latin American countries have extended their exclusive fishing zones up to 200 miles on the basis of conservation.[19] In 1970, Canada enacted "The Canadian Arctic Waters Pollution Prevention Act,"[20] which extended an anti-pollution zone up to 100 nautical miles from her Arctic coast.[21] Many nations have contended that Canada cannot extend her jurisdiction in this manner and that she must confine her environmental enactments to the twelve mile zone. However, as Louis Henkin points out, Canada has several points in her favor.[22] Canada declares that needed change often comes only from unilateral acts, and cites the Truman Proclamation. Canada would not agree to accept jurisdiction of the International Court of Justice and pointed out that any state which seeks to make new law cannot agree to litigate under the old law.[23]

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18. CONVENTION OF THE TERRITORIAL SEA AND THE CONTIGUOUS ZONE, *supra* note 12, at Article 24(2).

19. It should be noted that Article 7 of THE CONVENTION ON FISHING AND CONSERVATION OF THE LIVING RESOURCES OF THE HIGH SEAS, *supra* note 12, provides for special authority in coastal states to initiate conservation measures unilaterally in the absence of agreement by the states affected.

20. 18-19 ELIZ. 2 (1970).

21. The Canadian legislation forbade pollution within the zone, imposed penalties and civil liability for violations, including innocent violations, and authorized regulation and inspection of vessels. Amador has noted the tendency of other nations to extend their jurisdiction on the basis of "sanitary regulations." AMADOR, THE EXPLOITATION AND CONSERVATION OF THE RESOURCES OF THE SEA: A STUDY OF CONTEMPORARY INTERNATIONAL LAW (1963). THE ANNUAL REPORT OF THE PRESIDENT TO THE CONGRESS ON MARINE RESOURCES AND ENGINEERING DEVELOPMENT lists ten states which assert sovereignty or jurisdiction beyond territorial zones for purposes of sanitation or conservation control. Petaccio, *Water Pollution and the Future Law of the Sea*, 21 INT'L & COMP. L.Q. 38 (1972).

22. Henkin, *Arctic Anti-Pollution: Does Canada Make—or Break—International Law?* 65 AM. J. INT'L L. 131 (1971). *See generally* Green, *International Law and Canada's Anti-Pollution Legislation*, 50 ORE. L. REV. 462 (1971); Bilder, *The Canadian Arctic Waters Pollution Prevention Act: New Stresses on Law of the Sea*, 69 MICH. L. REV. 1 (1970).

23. Canada added further complication to existing international law by characterizing her action as self-defense. General international law allows a state to take

An important question raised by Canada's act is whether other nations will extend protective legislation to such a distance on the basis that they are protecting the international community's interests in the seas. If the concept of the patrimonial sea is agreed upon, all states would have authority to enact anti-pollution measures within their 200 mile zones. However, there is considerable opposition, for such enactments are seen as conflicting with freedom of the seas.[24]

Other provisions of the 1958 Geneva Conventions give states the right to enact anti-pollution measures beyond their territorial seas. The Convention on the Continental Shelf provides that exploration and exploitation of the continental shelf "must not result in an unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea."[25] The same Convention refers to the establishment of safety zones around installations erected on the continental shelf. Article 5(7) states that "The coastal state is obliged to undertake, in the safety zones, all appropriate measures for the protection of the living resources of the sea from harmful agents."

A concern for pollution was explicitly stated in Article 24 of the Convention on the High Seas.

> Every State shall draw up regulations to prevent pollution of the seas by the discharge of oil from

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emergency measures when a maritime casualty (or an impending casualty) poses a threat to its coastline. In such situations, states are justified in acting on grounds of self-protection. Many scholars see this right of self-protection as being further extended to protect a state's economic interests. In protecting such interests, a state's jurisdiction would not be confined to its territory. The 1945 Truman Proclamation was based in part on the principle of self-protection. *See* Kalsi, *Oil in Neptune's Kingdom: Problems and Responses to Contain Degradation of the Oceans by Oil Pollution*, 3 ENVIRONMENTAL AFFAIRS 89 (1973).

It is not a quantum leap from protection of a state's economic affairs to protection of a state's environment. However, when a state labels an environmental protection action a "self-defense measure," it totally distorts the international legal concept of self-defense. The U.N. CHARTER does not grant the right of self-defense; it is a right that is reserved to states. Article 51 limits "individual or collective self-defence" to an armed attack. The principles of the U.N. are enumerated in Article 2. Article 2(4) provides that "All Members shall refrain in their international relations from the threat or use of force *against* the territorial integrity or political independence of any state. . . ." (emphasis added). *See* STONE, LEGAL CONTROLS OF INTERNATIONAL CONFLICT (1959). Traditionally, actions of self-defense have been limited by the above language. Today the use of economic sanctions has the potential to be just as damaging as force against a state's political independence or territorial integrity. For this reason, many argue that the right of self-defense includes protection of a nation's economic interests. *See* Green, *supra* note 22.

24. Nelson holds that the "panoply of duties which is identified with the territorial sea cannot be associated with the patrimonial sea." However, those states which claim to the 200 mile zone for economic, political and social reasons (stricto sensu) as opposed to simply extending jurisdiction over resources might be "under a legal obligation to discharge the duties associated with the territorial sea. . . ." Nelson, *The Patrimonial Sea*, 22 INT'L & COMP. L.Q. 668, 680 (1973).

25. CONVENTION ON THE CONTINENTAL SHELF, *supra* note 12, at Article 5(1).

> ships or pipelines or resulting from the exploration of the seabed and its subsoil, taking account of existing treaty provisions on the subject.[26]

Thus, the duty to prevent pollution is a corollary to the right to explore and exploit the continental shelf and the deep seabed.

It appears that states already possess significant authority to enact protective environmental legislation, not only within their territorial sea, but beyond. However, it should be noted that as of May 1, 1973, only 51 nations were signatories to the Conventions on the High Seas and the Continental Shelf and that the International Court of Justice only noted Articles 1 through 3 of the Convention on the Contiental Shelf as "pre-existing or emergent customary law." A serious conflict is developing between environmental efforts by some states and the traditional concept of freedom of the seas.[27]

The Duty of States to Prevent Pollution

The principle, *sic utere tuo ut alienum non laedas,* is found in nearly all domestic legal systems and must fall under the category of a general principle of law recognized by civilized nations.[28] The phrase basically means that a possessor of property may not use his property in such a way as to harm another's rights. The famous *Trail Smelter Arbitration* involved air polluton from a smelter in British Columbia harming citizens of the United States. Regarding Canada's duties, the Tribunal stated:

> [U]nder the principles of international law, as well as of the law of the US, no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the property or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[29]

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26. The mention of "existing treaty provisions" was a reference to the INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION OF THE SEA BY OIL (1954), which has since been amended in 1962, 1969 and 1971.

27. This paper will not deal with the extent to which a state is responsible for the acts of private individuals. The state/individual relationship vis-a-vis international environmental law raises many interesting issues. The recent trend toward individuals of one state suing another state is worth noting. *See* McCaffrey, *Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States,* 3 CAL. WESTERN INT'L L.J. 191 (1973).

28. Caflisch, *supra* note 11, at 12.

29. (United States v. Canada) 3 U.N.R.I.A.A. 1965 (1938-41).

The *Corfu Channel Case* also emphasized state responsibility. Albania had mined her territorial waters; British warships were damaged during maneuvers and lives were lost because the presence of the mines was not known. In holding that Albania had a responsibility to warn the British ships, the International Court of Justice pointed out that such responsibility entailed:

> every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States.[30]

There appears to be adequate authority for the proposition that a nation must accept responsibility for any of its acts which create a nuisance affecting other states. By analogy to the *Trail Smelter Arbitration,* one state might be found liable to another state for pollution emanating from its activities on land, on the continental shelf, or on the high seas. This principle was adopted at the United Nations Conference on the Human Environment held at Stockholm in June, 1972. The final declaration adopted Principle 21, which reads:

> States have, in accordance with the Charter of the UN and the principles of international law, . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.[31]

This principle was adopted by the United Nations in Resolution 2749 (XXV), "Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction."[32]

Many scholars predict that the regional application of *sic utere tuo ut alienum non laedas* principle to riparian rights will form a basis

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30. U.K. v. Albania, Judgment (Merits) April 9, 1949; (1949) I.C.J. 4.

31. U.N. Doc. A/CONF.48/14. Note 26, at 7, Principle 21. Cited also in 9 INT'L LEGAL MATERIALS 1416 (1972).

32. The importance of Principle 21 was expressly recognized by the U.N. General Assembly's Second Committee in Draft Resolution III of its Report, which stated:

> Recalling principle 21 . . . of the Declaration . . . concerning the international responsibility of States in regard to the human environment,
> Bearing in mind that those principles lay down the basic rules governing the matter,
> Declares that no resolution adopted at the 27th session of the General Assembly can affect principle 21. . . .

Id. at 35. *See also* Brownlie, *A Survey of International Customary Rules of Environmental Protection,* 13 NAT. RES. J. 579 (1973); Teclaff, *The Impact of Environmental Concern on International Law,* 13 NAT. RES. J. 357, 370 (1973).

for the law of the sea. Petaccio analyzes several regional conventions where the principle was agreed upon. He points out that by substituting the term "high seas" for "river" and "international riparian" for "country" in the 1967 Helsinki Rules, a foundation would exist for future law of the seas.[33] In 1952, the United Nations Economic Commission for Europe concluded that "most authorities" agreed that states enjoy a limited sovereignty over communal waters.[34] However, as Teclaff points out, fluvial law "does not encompass, except by implication, damage done by water resource development to other elements of the environment."[35]

It might also be argued that a duty to refrain from polluting the oceans is inherent in the concept of freedom of the seas—that such freedom entails the concept of reasonable and non-exhaustive use of the sea. If the duty is inferred, who may enforce it? A state may only bring an international claim if it can show it has been willfully harmed within its jurisdictional limits or if it has suffered damage with respect to fish stocks which it normally exploited.[36] To bring such a claim would involve incredible problems of establishing the degree of harm and the required proof. Michael Hardy, the legal advisor to the Commission of the European Communities, predicts such a case

> would be likely to turn not on the basic question of the legality or illegality of waste disposal per se, but on the extent of knowledge, the foreseeability of harm and the standard of proof required, all matters of which international tribunals (by comparison with national courts) have relatively little experience or case law to guide them.[37]

General international law gives states the right in certain instances to enact protective environmental legislation, but also imposes a duty to prevent pollution of the oceans. To achieve any meaning-

33. Petaccio, *supra* note 21, at 25.
34. *Id.*
35. Teclaff, *supra* note 32, at 361.
36. One of the most cited statements concerning a state's responsibility is the definition put forth by Sir Hersch Lauterpacht.

> An act of a State injurious to another State is nevertheless not an international delinquency if committed neither willfully and maliciously nor with culpable negligence. Therefore, an act of a State committed by right, or prompted by self-preservation in necessary self-defense does not constitute an international delinquency, no matter how injurious it may actually be to another State.

1 OPPENHEIM, INTERNATIONAL LAW 343 (8th ed. Lauterpacht 1955).
37. Cited in Schachter & Serwer, *supra* note 5, at 105.

ful protection of the oceans, international coventions and treaties must go beyond the well-turned phrase of "duty to protect" and set specific standards.

III. EXISTING TREATIES, CONVENTIONS AND UNITED NATION AGENCIES

Although there has been a substantial amount of international concern for the problem of pollution, the treaties fall short of stating "uniform and actionable" controls. However, as illustrated by the most recent IMCO Conferences dealing with pollution by ships, such controls are being developed. As Robert McManus wrote regarding the Ocean Dumping Treaty, "For better or worse, the protocols and general conservatism of the international community seldom impel it to giddy actions."[38]

Controls on Oil and Other Substances

In 1942 the United States passed the Oil Pollution Act,[39] and called an international conference in 1946. The United States proposed that there be an absolute prohibition on the discharge of oil at sea, but this proposal was rejected. It was not until 1954, in The London Convention for the Prevention of Pollution of the Sea by Oil,[40] that the international community reached any major agreement on the control of oil pollution. This Convention now has forty-two signatories. It was last amended in 1971, and currently provides for oil discharge under limited circumstances, disposal facilities, record books and inspection privileges. The major defect of the Convention is that enforcement is left to the flag state of the vessel violating the treaty provisions, rather than to the injured coastal state.[41]

The International Convention on Civil Liability for Oil Pollution[42] was drawn up under IMCO auspices in 1969. The agreement deals with the nature and extent of a ship owner's liability to compen-

38. McManus, *The New Law on Ocean Dumping, Statute and Treaty*, 5 OCEANS 24 (1973).
39. 43 Stat. 604-06.
40. 9 INT'L LEGAL MATERIALS 1 (1970).
41. Unsuccessful attempts have also been made to regulate the design and equipment of vessels. The Institute of International Law adopted a resolution in 1969 providing that states may take measures for preventing pollution by regulating, "the design and equipment of ships [with] the right to prohibit any ship that does not conform to the standards set up . . . from crossing their territorial seas and contiguous zones and from reaching their ports. The legality of a state's authority to take such measures has been seriously questioned. Caflisch, *supra* note 11, at 25.
42. 9 INT'L LEGAL MATERIALS 45 (1970).

sate for any pollution damage. A fourteen million dollar ceiling is set per incident. Liability is not found if the polluting incident results from "acts of war, hostilities, civil war, insurrection or natural phenomenon of an exceptional, inevitable and irresistible character."

The Convention was amended in 1971 to provide for a fund for direct compensation to governments. The fund was established by tanker owners (Tanker Owners' Voluntary Organization on Oil Pollution) with a ceiling of $9,600,000 per incident. Another group, Oil Companies International Marine Forum, was organized for the purpose of providing "higher cover." The 1971 amendments drew favorable comments from the international community. John Hargrove wrote, "Who could have predicted that the great shipping states, whose special hypersensitivity is freedom of the seas, would have accepted what amounts to a rudimentary special purpose tax on the right to navigate the ocean?"[43] As of mid-1974, this Convention was not in force.

The Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties[44] attempts to improve notice provisions and to provide effective enforcement. This agreement provides that a state must consult with independent experts named by IMCO unless the urgency is so extreme that time is of the essence. Even in such an emergency a state must give advance notice of the measures it is contemplating to the natural persons affected by the action. Once the state has acted it must then notify all states and persons affected of the actions that were taken. Arbitration is requried to insure compensation to the injured persons and states.

In 1973, another conference was held under the auspices of IMCO to consider a Draft Protocol to the 1969 Convention Relating to Intervention on the High Seas in Case of Oil Pollution Casualties and the International Convention for the Prevention of Pollution from Ships. The latter convention, as yet not ratified, represents a considerable advance over 1954 convention in several respects, although it still falls far short of the goal of completely eliminating the intentional discharge of oil into the seas and minimizing the probability of accidental discharges. It represents an advance in pollution control in that it regulates not only "black oils" but also "white oils," such as light fuel oil, gasoline, kerosene and jet fuel. Also mandatory for Convention parties are regulations for harmful bulk liquids. Optional

43. Hargrove, *New Concepts in the Law of the Sea*, 1 OCEAN DEVELOPMENT & INT'L L.J. 1, 11 (1973).
44. 9 INT'L LEGAL MATERIALS 25 (1970).

annexes to the treaty regulate harmful packaged substances, vessel sewage, and garbage.

The treaty still allows intentional discharge of oil, limited however to 60 liters per mile up to 1/15,000ths of the cargo for existing ships and 1/30,000ths for new tankers contracted for after December 31, 1975, or delivered after December 31, 1979. Furthermore, tankers are prohibited from any discharge, no matter what its oil content, within 50 miles of land. Neither ships nor tankers can discharge any oil at all within the Mediterranean, Black, Baltic, and Red Seas and the Persian Gulf.[45] The new requirements are compatible with the "load on top" method of loading oil, which reduces the amount of oil discharged as waste. Under this method, the water that is used to wash down tanks after cargo is unloaded is placed in a storage tank, where, after a settling period, the water is drained out from the bottom of the tank and new cargo of oil is loaded into the top. A basic issue at the conference was the question of segregated ballast. Tankers carry oil one way and seawater as ballast on the return trip; ballast water pumped out at the end of the voyage contains residues of oil. Under the convention, new ships of more than 70,000 tons will be required to have segregated ballast tanks. However, since many large ships have been contracted for, or will be delivered before the respective deadlines, this provision will not be fully effective for decades.

A proposal at the conference that tankers be required to be constructed with double bottoms, as a safety measure in case of groundings, was rejected. On the other hand, a significant step forward was the conference's new requirements that automatic discharge monitoring and control systems be installed on all tankers to keep a record of discharges. This record will make it easier for the flag states and coastal states, (the latter given jurisdiction where violations occur within their waters) to obtain convictions in their courts.

At this same conference held under the auspices of IMCO in 1973, the principles of the 1969 Convention were extended to noxious and hazardous substances other than oil.[46]

Controls Over Ocean Dumping

The Convention on the Prevention of Marine Pollution by

45. Livingston, *Oil on the Seas*, 16 ENVIRONMENT 39 (1974).
46. THE DRAFT PROTOCOL TO THE 1969 CONVENTION RELATING TO INTERVENTION ON THE HIGH SEAS IN CASES OF OIL POLLUTION CASUALTIES.

Dumping of Wastes and Other Matters[47] is the major treaty in this area. This Treaty lists prohibited substances (the blacklist) and restricted substances (the graylist). Restricted substances include "high level" radioactive wastes, organohalogen compounds and biological and chemical warfare agents. The restricted substances may be disposed of in the ocean, but only by permit. Restricted substances are those that require special care, such as arsenic, lead, zinc, and their compounds, beryllium, chromium nickel and bulky solids. The treaty has left open jurisdictional questions and precise definitions of substances have been left to interpretation. An important caveat to the blacklist (*i.e.*, the list of prohibited substances) states that substances may not be prohibited if they are "rapidly rendered harmless by physical, chemical or biological processes in the sea. . . ." This caveat weakens the effectiveness of the treaty. The blacklist is also inapplicable to wastes "such as dredge spoil and sewage slude, that contain only trace quantities of blacklisted substances."[48] The treaty also lacks effective monitoring methods and sanctions against violators.

Although these various treaties are an important source of environmental protection, two important areas are left virtually untouched: (1) pollution emanating from land-based sources; and (2) pollution arising from the development of oceanic resources. The 1958 Geneva Conventions provide that exploration and exploitation "must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea,"[49] and that states are to draw up regulations to prevent "discharge of oil from ships or pipelines or resulting from the exploration of the seabed and its subsoil."[50] No other international convention speaks to the issue of standards for the development of resources in the sea.

In light of the estimate that ninety percent of marine pollution emanates from land-based sources, these omissions are glaring. Thus, it is necessary to question the value of continuing to strive for stricter standards in the realm of marine transport and ocean dumping.[51] Perhaps the greatest significance of the treaties is that pollution is recognized as an international concern requiring international cooperation.

47. CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATERIALS (1972).
48. McManus, *supra* note 38, at 24.
49. CONVENTION ON THE CONTINENTAL SHELF, *supra* note 12, at Article 5(1).
50. CONVENTION ON THE HIGH SEAS, *supra* note 12, at Article 24.
51. Due to the miniscule proportion of marine pollution that results from dumping, many feel that little damage actually results to the oceans. However, the regulation of dumping is significant for it negates the idea that nothing should be done until damage is perceived.

Treaties alone do not give the total view of a nation's concern for the environment, however, for specialized agencies of the UN have long dealt with environmental issues.

The Environment and Existing UN Agencies

UNESCO (UN Educational, Social and Cultural Organization) has developed and set into motion the Man in the Biosphere Program. The IOC (Intergovernmental Oceanographic Commission) also functions under the auspices of UNESCO. The ICO is the lead UN agency for oceanographic research and has established the International Global Ocean Station System (IGOSS). Another UN body, GESAMP (Joint Group of Experts on the Scientific Aspects of Marine Pollution), is presently studying ways to measure pollution of the seas caused by transfer from the atmosphere and the dispersal of surface pollution by the wind and waves. The Intergovernmental Maritime Consultative Organization (IMCO) has purview over international maritime matters and its role with relation to the conventions has already been noted. The Subcommittee on Oceanography of the Administrative Coordination Committee of ECOSOC coordinates the ocean activities of the various specialized agencies of the UN. The Division of Resources and Transportation of the Economic and Social Council assists nations in the development of the resources of the seabed and subsoil within their territorial jurisdiction. The World Meterological Organization monitors atmospheric pollution.

The environmental consciousness of the world was awakened by the UN Conference on the Human Environment, held at Stockholm in 1972. Six months after the Conference the General Assembly adopted the Resolution on Institutions and Financial Arrangement[52] which established the Governing Council of the UN Environment Program, the Environment Secretariat, the Environment Fund, and the Environment Co-ordination Board. This institutional machinery is known as the UN Environment Program (UNEP) and its purpose is to carry out the Action Plan adopted at the Stockholm Conference. The Action Plan consists of 109 Recommendations[53] aimed at three broad types of action: "The global environmental assessment program (Earthwatch); Environmental management activities; and International measures to support the national and international actions

52. G.A. Res. 2997 (XXVII) Section II, Paragraph 1, U.N. Doc. A/890 and Corr. 2, at 3 (1973), *cited in* Hardy, *The United Nations Environment Program*, 13 NAT. RES. J. 235, 236 (1973).
53. U.N. Doc. A/CONF 48/14 (1972), *cited* in *id.* at 242.

of assessment and management."[54]

The Governing Council's (UNEP) first session met at Geneva, June 12-22, 1973 and adopted general policy objectives,[55] and stated among its particular policy objectives:

> To detect and prevent serious threats to the health of the oceans through controlling both ocean-based and land-based sources of pollution, and to assure the continuing vitality of marine stocks.[56]

At the second session of the Governing Council held in March, 1974, the Governing Council approved the Executive Director's proposed program activities for the following year, which included

54. Brown, *The Conventional Law of the Environment*, 13 NAT. RES. J. 203, 209 (1973).

55. The following general policy objectives were adopted:

> (a) To provide, through interdisciplinary study of natural and man-made ecological systems, improved knowledge for an integrated and rational management of the resources of the biosphere, and for safeguarding human well-being as well as ecosystems;
>
> (b) To encourage and support an integrated approach to the planning and management of development, including that of natural resources, so as to take account of environmental consequences, to achieve maximum social, economic and environmental benefits;
>
> (c) To assist all countries, especially developing countries, to deal with their environmental problems and to help mobilize additional financial resources for the purpose of providing the required technical assistance, education, training and free flow of information and exchange of experience, with a view to promoting the full participation of developing countries in the national and international efforts for the preservation and enhancement of the environment.

UNEP/GC/10/Annex I, at 4.

56. UNEP/GC/10/Annex I, at 3. The following program priorities for action relating to the oceans were adopted:

> (a) To carry out objective assessments of problems affecting the marine environment and its living resources in specific bodies of water;
>
> (b) To prepare a survey of the activities of international and regional organizations dealing with conservation and management of the living resources of the oceans;
>
> (c) To assist nations in identifying and controlling land-based sources of pollution, particularly those which reach the oceans through rivers;
>
> (d) To stimulate international and regional agreements for the control of all forms of pollution of the marine environment, and especially agreements relating to particular bodies of water;
>
> (e) To urge the IMCO to set a time-limit for the complete prohibition of international oil discharge in the seas, as well as to seek measures to minimize the probability of accidental discharges;
>
> (f) To develope a program for the monitoring of marine pollution and its effects on marine ecosystems, paying particular attention to the special problems of specific bodies of water including some semi-enclosed seas . . . .

Id. at 10.

"measures for preserving the marine environment with special emphasis on monitoring and control of land-based sources of ocean pollution, particularly river discharges," and "implementation of the first phase of Earthwatch, including the Global Environmental Monitoring System (GEMS) and the International Referral System."[57]

Though the machinery, funds and a plan exist, the UNEP suffers severe restrictions. The Environment Council and Secretariat are limited to "information gathering and coordination of UN programs, and the issuance of non-binding guidelines,"[58] The UNEP also lacks the power to hear and to pass on complaints—a power that has been granted to the UN Political Rights Covenant's Committee. The UNEP, moreover, cannot comment on reports submitted by States—a right which is accorded to the UN Economic, Social and Cultural Rights Committee.[59] Perhaps some day the right to a clean environment will be a fundamental right and accorded the corresponding respect and protection that other rights now enjoy.[60]

IV. SUBCOMMITTEE III

In 1967, the United States first considered the issue of peaceful uses of the seabed and adopted Resolution 2340 which established an Ad Hoc Committee to Study the Peaceful uses of the Seabed.[61] Two years later the General Assembly passed four resolutions. The Secretary-General was requested to ascertain member states' views on convening a conference on law of the sea and to prepare a study on the international machinery needed for jurisdiction and control over peaceful uses of the seabed. The Seabed Committee was requested to prepare a statement of legal principles and exploitation of the seabed beyond national jurisdiction was halted pending the establishment of an international authority.[62] The following year (1970) the General Assembly requested the Secretary-General to study the problem arising from exploitation of the seabed, the ensuing economic impact on developing countries and the special problems of landlocked states.[63]

That same year Resolution 2750 C called for a Conference on the Law of the Sea to convene in 1973 to consider the establishment of

57. 29 U.N. GAOR Supp. 25, at 3 (1974).
58. The Stockholm Declaration and Recommendations are not binding on states.
59. Teclaff, *supra* note 32, at 380.
60. *See* Hardy, *supra* note 52, at 235-55.
61. G.A. Res. 2340, 22 U.N. GAOR Supp. 16, at 14, U.N. Doc. A/6716 (1967).
62. G.A. Res. 2574A-2574D, 24 U.N. GAOR Supp. 30, U.N. Doc. A/7630.
63. G.A. Res. 2750 and 2750B; 25 U.N. GAOR Agenda Item 25, U.N. Doc. A/RES/2750 (1971), also at U.N. Doc. A/8097.

an "equitable international regime," including the "the preservation of the marine environment (including *inter alia*, the prevention of pollution) and scientific research."[64] The following year in Geneva (March 1971) the Committee set up three subcommittees of the whole. Subcommittee I was to deal with the international organization for the area of the seabed. Subcommittee II established one working group of the whole to deal with the limits of the territorial sea, navigation through straits, the contiguous zone, the high seas, fisheries, and the seabed within national jurisdiction. Subcommittee III was to deal with the preservation of the marine environment and scientific research and to "prepare draft treaty articles thereon."

Subcommittee III held only 11 meetings in 1971. Serious discussion on the issue of pollution was never reached. The consensus was that this issue would be dealt with at the upcoming Stockholm Conference on the Human Enviroment, and the International Maritime Consultative Organization's Conference on marine pollution in 1973. Additionally, the issue of pollution was overshadowed by the question of jurisdiction and the establishment of an international regime.

In March, 1972, Subcommitte III adopted the revised proposal put forth by Canada.[65] This proposal contained 5 main headings:

A. Preservation of the marine environment (including the seabed)
B. Elimination and prevention of pollution of the marine environment (including the seabed)
C. Scientific research concerning the marine environment (including the seabed)
D. Development and transfer of technology
E. Other Matters.[66]

In the summer of 1972 the Subcommittee also set up a subgroup on marine pollution which was called Working Group 2.[67] "[I]ts

64. G.A. Res. 2750D; 25 U.N. GAOR Agenda Item 25, U.N. Doc. A/RES/2750 (1971), also at U.N. Doc. A/8097.
65. Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond Limits of National Jurisdiction, 28 U.N. GAOR Supp. 21, at 73, U.N. Doc. A/9021 (1973). The Canadian Proposal is therein cited as A/AC. 138/SC. III/L. 14.
66. *Id.* at 85.
67. The membership was open ended and was composed of the following: Algeria, Brazil, Bulgaria, Canada, Ecuador, India, Indonesia, Iran, Ivory Coast, Japan, Kenya, Liberia, Madagascar, Mauritius, Mexico, Morocco, New Zealand, Nigeria, Peru, Philippines, Romania, Spain, Somalia, Sudan, Sweden, Thailand, Trinidad and

[purposes] were to draft texts leading to the formulation of draft treaty articles on the preservation of the marine enviroment and the prevention of marine pollution."[68] In 1973 Subcommittee III held two sessions: Working Group 1 dealt with scientific research during the first session and with the transfer of technology during the second session.

Thirty-five items were considered in the first session, three of which mentioned protection of the marine environment.[69] The relationship between scientific research and environmental controls was not emphasized. There is a need to set forth the nexus between scientific research and marine pollution. As to the exploitation of mineral wealth in the deep seabed (beyond national jurisdiction as presently established), several companies are now engaged in "scientific research" as to the location of manganese nodules and oil, and the feasibility of profitably exploiting these resources. By the 1970 "Declaration of Principles" adopted by the General Assembly, no one may claim or acquire rights in the deep seabed "incompatible with the international regime to be established." Now is the time to look not only at the economic potential of the deep seabed exploitation, but at the environmental repercussions that such mining might entail. Prior to Caracus, an official of the U.S. Environmental Protection Agency wrote:

> But there are, in my view, some little understood environmental issues here. First, there is the possibility of marine pollution from off-shore processing of nodules. Second, there is the potential damage to such benthic organisms as there are in the nodule areas, and the relationship of those organisms to the ecology as a whole. Third, one may ask what effect, if any, the removal of nodules would have on the chemical balance of the world's oceans. To my knowledge, these issues have not been discussed in international fora.[70]

The summary of the debate on the transfer of technology included one item which dealt with marine pollution.

Tobago, Ukranian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of American and Venezuela. There was one vacancy in the Asian group.

68. Report, U.N. Doc. A/9021, *supra* note 65, at 74.
69. *Id.* at 80, Items 46, 48 and 49.
70. Memo, Environmental Protection Agency, February 15, 1974.

> It was suggested that, owing to lack of such technological and financial help from developed states, developing countries might not be able to maintain strict international standards for the prevention of marine pollution, unless they stopped development activities. However, such an alternative was not feasible because of the need of such countries to better living standards of their population.[71]

This item summarizes the disagreement which exists between developing and developed countries as to the setting of standards and implementation of environmental controls. The main issue has been who "owns" the oceans and the seabeds, and little thought has been given in the international political forum to the question of environmental safeguards via financial incentives.[72]

No formal papers on pollution were submitted to Working Group 2 until 1973. Six proposals were presented in the first session, and seven more proposals were submitted during the second session.[73] During 1973, the Working Group on Marine Pollution concerned itself with the following subjects:

> General obligation to preserve and protect the marine environment;
>
> General obligation of States to adopt measures to prevent pollution of the marine environment, irrespective of the source of pollution;
>
> Obligation of States to adopt specific measures in connection with certain sources of ma-

71. Report, U.N. Doc. A/9021, *supra* note 65, at 83.

72. Such alternatives have been explored by scholars. *See* Reitze, *Pollution Control: Why Has It Failed?*, 55 A.B.A.J. 293 (1969); Pearson, *Extracting Rent from Ocean Resources*, 1 OCEAN DEVELOPMENT AND INT'L L.J. 221, 221-38 (1973). Another scholar puts forth the thesis that the role of insurance could be developed to provide the necessary interrelationship between licenses, entrepreneurial standards and regulatory control. Dawson, INSURANCE AS A REGULATOR, *cited in* W. FRIEDMAN, THE FUTURE OF THE OCEANS 95 (1971). *Cf.* Branco, *The Tax Revenue Potential of Manganese Nodules*, 1 OCEAN DEVELOPMENT & INT'L L.J. 201, 201-08 (1973). Mr. Branco attempts to "quantify the revenue potential from the future nodule industry." He concludes that "regardless of the actual level of tax revenue from nodules by 1985, it will not transform the scenario of world resource distribution and financial availability for development promotion in developing countries." *Id.* at 207. However, he admits that this new source of funds would not be negligible, for even using his medium assumption (as to future revenues) the amount realized "would be more than the total funding of the U.N. Development Programme for 1973."

73. Of the first six proposals only four were comprehensive. Five of the subsequent seven proposals were comprehensive. Stevenson & Oxman, *The Preparations for the Law of the Sea Conference*, 68 AM. J. INT'L L. 1, 24 (1974).

rine pollution, and the relation between such measures and generally accepted international standards; and

International co-operation and technical assistance.[74]

One of the most comprehensive texts that emerged from the Working Group was Paper No. 8.[75]

1. States shall take all necessary measures to prevent pollution of the marine environment from any source, *using for this purpose the best practicable means in accordance with their capabilities*, individually or jointly, as appropriate. In particular, States shall take measures to ensure that activities under their jurisdiction or control do not cause damage to other states, including their environment, by pollution of the marine environment.

2. The measures taken pursuant to these articles shall deal with all sources of pollution of the marine environment, whether land, marine or any other source, including rivers, estuaries, the atmosphere, pipelines, outfall structures, vessels, aircraft and sea-bed installations or devices. They shall include *inter alia*:

(a) In respect of land-based sources of pollution of the marine environment, measures designed to minimize the release of toxic and harmful substances, especially persistent substances, into the marine environment, to the fullest possible extent;

(b) In respect of pollution from vessels, measures relating to the prevention of accidents, the safety of operations at sea, and intentional or other discharges, including measures relating to the design, equipment, operation and maintenance of vessels, especially to those vessels engaged in the carriage of hazardous substances whose release into the marine environment, either accidentally or through normal operation

74. Report, U.N. Doc. A/9021, *supra* note 65, at 85 gives the document numbers of the four original proposals from which the topics were derived as A/AC.138/SC.III/L.27, 28, 32, and 33.

75. *Id.* at 86-88 (emphasis added).

> of the vessel, would cause pollution of the marine environment; and
> (c) In respect of installations or devices engaged in the exploration and exploitation of the natural resources of the sea-bed and subsoil and other installations or devices operating in the marine environment, measures for the prevention of accidents and the safety of operations at sea, and especially measures related to the design, equipment, operation and maintenance of such installations and devices.
> 3. The measures taken pursuant to these articles shall:
> (a) In respect of land-based sources of pollution of the marine environment, take into account such international standards as may be elaborated;
> (b) In respect of marine-based sources of pollution of the marine environment, conform to generally accepted international standards.
> 4. In taking measures to prevent pollution of the marine environment, States shall have due regard to the legitimate uses of the marine environment, and shall refrain from unjustifiable interference with such uses.

Paragraph 1 raises a troublesome issue by requiring that pollution measures take economic factors into account. Many developed countries opposed this type of provision, and alternative texts were drafted which omitted reference to nations' capabilities. Taking into account "measures in accordance with a country's capabilities" also has the disadvantage of making each nation the judge of its own capabilities. Absent some international revenue program, a dual system of standards, one for developing countries and one for developed countries, appears to be the most equitable approach. Such dual standards should be set out or mentioned instead of calling for the best practical means vis-a-vis capabilities.[76] This section also leaves open the ques-

76. Principle 23 of the Declaration (Stockholm Report, *supra* note 31, at 7) would authorize a dual system of standards, since those standards "which are valid for the most advanced countries . . . may be inappropriate and of unwarranted social cost" for the developing countries. The Resolution on Institutional and Financial Arrangements which set up the administrative machinery for the UNEP, recommended that the Governing Council:

> Maintain under continuing review the impact of national and international environmental policies and measures on developing

tion whether one state can complain about another state's activities which affect international (community) waters. With no provision as to monitoring, enforcement, penalties or compulsory settlement of disputes, Paragraph 1 simply reads as a statement of purpose that marine pollution should be prevented.

Part 2, Subpart (a) refers to land-based sources of pollution and the minimization of "toxic or harmful" substances. Present international law does not touch on this area. However, it is questionable whether this section goes beyond Article 25 of the Geneva Convention on the High Seas. Article 25 provides that states in cooperation with competent international organizations can take measures to prevent pollution of the seas by harmful agents. But this section, like Article 25, lacks the adoption of "recommendations or regulations for measures."

To be effective, this provision should require that prohibited substances be specified. If substances were merely to be restricted, discharge standards would have to be set. As to the United States' position regarding land-based sources, "it is unlikely that any significant number of Nations would accept any meaningful action along these lines; and the US is not pursuing any specific proposal for controls at this time."[77] This is unfortunate since it is estimated that 90 percent of marine pollution originates from land-based sources.

Paragraphs 3 and 4 refer to standards and the fact that such standards should not interfere with navigation. These issues were more fully developed in separate papers.

During the second session (July 4th to August 15th, 1973) Working Group 2 dealt specifically with: (1) global and regional cooperation; (2) technical assistance; (3) monitoring (4) standards; and (5) enforcement.[78]

> countries, as well as the problem of additional costs that might be incurred by developing countries in the implementation of environmental programmes and projects, to ensure that such programmes and projects shall be compatible with the development plans and priorities of those countries. . . .

Para. 2f. And:

> [I]n order that the development priorities of developing countries shall not be adversely affected, adequate measures should be taken to provide additional financial resources on terms compatible with the economic situation of the recipient country (para. 10). . . .

Cited in Teclaff, *supra* note 32, at 380-81.

77. Memo, *supra* note 70.

78. Report, *supra* note 65, at 92-102. *See* proposals cited therein as A/AC.138/SC.III/L.27, 28, 32, 33, 36, 37 Add. 1, 40, 41, 43, 46, 47, 48, 49 and 50. The Working Group also referred to the relevant proposals in A/AC. 138/SC.II/L.28.

On the topic of monitoring, Paper No. 13 was considered by the Working Group. The text of the paper is as follows:[79]

> 1. States shall employ suitable systems of observation, measurement, evaluation and analysis to determine the risk or effect of pollution on marine environment, especially pollution likely to arise from activities which they permit or in which they engage.
> 2. States shall disseminate, as soon as possible, the data and information obtained on the risks and effects of pollution on the marine environment to States likely to be affected and to the international organizations concerned, with a request to disseminate such data and information.

The issues of pollution control standards and jurisdiction to establish such standards were discussed for nearly three weeks. No consensus was reached, and the Working Group came up with a series of alternative texts: six on seabed pollution; six on vessel source pollution; two on land-based pollution; and two on a state's authority to establish standards.

The thrust of the standards for land-based sources was that each state is to establish "national standards," and to "endeavour to establish and adopt international standards."[80] The consensus of the Working Group was that minimum standards were necessary for exploration and exploitation of the seabed. However, many states felt that the establishment of an international regime must precede standard setting, or that the establishment of minimum standards was inconsistent with the concept of an exclusive economic zone.

The texts that dealt with vessel-source pollution specified that the standards should be set either by IMCO, UNEP, the Seabed Authority or that standards should be no higher than those of the flag state. Three texts dealt with the question of whether a coastal state could apply its higher standards to a vessel crossing its zone beyond its territorial sea. One approach would allow higher standards to be applied only by flag states to their own vessels and by port states to vessels entering their ports. Another approach would allow a coastal state to apply higher standards in its zone beyond the territorial sea, if

79. *Id.* at 92.
80. *Id.* at 97, Working Paper No. 15.

in its opinion adequate international standards were not established. A third approach would not allow a nation's standards to conflict with the standards set by developing states for their flag vessels.[81]

The competence of individual states to establish their own standards will be determined in large part by resolution of the jurisdiction issue. If an economic zone is created, the question of whether a coastal state would have the power to enforce its domestic environmental legislation within that zone is raised since maritime states fear restrictions under the guise of pollution control. Canada, for instance, was accused of unduly hampering shipping when it extended its 100 mile protective zone.

Those states opposing a pollution control zone distinguish a state's right to control pollution from a state's exercise of sovereignty over the resources within its jurisdiction. The concern for unhampered navigation was dealt with in several texts.

> Measures taken in accordance with this article must remain within the strict limits of the objectives of this Convention and must not be discriminatory in their application, and must not unnecessarily or unreasonably restrict legitimate uses of the marine environment, including navigation.[82]

The issue of enforcement was also discussed, but no alternative texts dealing specifically with enforcement were agreed upon. The proposals varied as follows:

> (1) Flag state enforcement against its vessels.
> (2) Port state enforcement, regardless of where the violation took place.
> (3) Coastal state action in emergency situations.
> (4) Coastal state action authorized by a settlement process against flag state vessels which have failed to comply with standards.
> (5) Coastal state enforcement in its zone beyond its territorial sea.
> (6) Limited coastal state enforcement in its zone beyond its territorial sea.[83]

81. Stevenson & Oxman, *supra* note 73, at 26.
82. Working Paper No. 15, Section IV, Part 2, in Report, *supra* note 65, at 97.
83. Stevenson & Oxman, *supra* note 73, at 26-27.

Only four proposals called for mandatory settlement of pollution disputes, and the proposals that dealt with state liability were tabled.

Many questions remained unanswered regarding a coastal state's authority in its economic zone.[84] Will a state's existing sovereignty over its territorial sea be extended to the economic zone for enforcement of its pollution control measures? If a state's standards should interfere with other nations' shipping, will existing international conventions or customary law control? Though the issues of jurisdiction and pollution control are closely related, the issue of jurisdiction need not be resolved before minimum standards, monitoring techniques, settlement machinery, or a revenue program to encourage developing nations to meet pollution control standards can be established.

V. CARACAS: RESULTS AND ANALYSIS

The object of the Third U.N. Conference on the Law of the Sea at Caracas was to achieve a comprehensive agreement on the international law of the sea. One U.S. delegate described it as "writing a constitution."[85] The most important reason for the Conference was widespread dissatisfaction among states with the existing legal regime of the oceans. Many nations fear that the traditional law of the sea is breaking down and jeopardizing interests protected by it, such as freedom of navigation. Other nations believe traditional law does not adequately protect current or anticipated interests. For example, there are no precise legal rules to deal with newly perceived problems such as pollution of the marine environment and the technological exploitation of the deep seabed.

Arvid Pardo, Maltese Ambassador to the UN, has urged that the mineral resources of the deep sea bed are the common heritage of mankind and should be shared among all nations according to need. His proposals before the U.N. General Assembly, on August 17 and November 1, 1967, led directly to the U.N. Resolutions in 1968 and 1970 which set up and prepared for the Third Conference at Caracas.

The Caracas conference had before it the work of the U.N. Seabed Committee, which had been preparing draft articles and proposals for the conference since 1970. It also had to take into account

84. It appears that states will agree on the concept of an economic zone 200 miles in breadth.

85. Leigh Ratiner, quoted in *The Oceans: Wild West Scramble for Control*, TIME, July 29, 1974, at 52.

the four conventions adopted by the 1958 Conference on the Law of the Sea at Geneva, relevant decisions of the International Court of Justice, the Declaration of Principles regarding the deep sea-beds adopted by the UN General Assembly in 1970, and a "vast array of official statements and scholarly writings on the existing law of the sea."[86] A successful conference would have strengthened international law and institutions generally and enhanced the prestige of the United Nations in particular.

The conference at Caracas did not reach its goal of a comprehensive treaty governing the law of the sea. The representatives did not reach a consensus on the basic issues of the nature and extent of national jurisdiction over the oceans. These issues must be settled before a draft of a comprehensive treaty is begun. The negotiations toward such a treaty are to continue in Geneva, March 17, 1975, through May 10, 1975, in Vienna or Caracas later in the summer of 1976, or early in 1976. The nations are "still talking"; they have not abandoned the international forum.

Ocean pollution received little separate consideration at Caracas. Before laws governing pollution can be drafted and considered, the issues of coastal state jurisdiction and responsibility must be resolved. The possibility of an international solution for problems of ocean pollution is still bound up with the achievements and disabilities of the LOS conference as a whole.

The work of the conference was divided among three committees. The First Committee dealt with an international seabed authority and its machinery, and was premised on the notion of regional representation. The Second Committe focused on the rights and duties of national states; this committee produced thirteen informal working papers which covered the breadth of the territorial sea, fishing zones and fisheries management, navigation (high seas and straits), and the rights of landlocked states. The Third Committee was concerned with the preservation of the marine environment, scientific research, and the transfer and development of marine techonology.

86. Stevenson & Oxman, *supra* note 73, at 1-3. Pardo's original memorandum to the General Assembly is reproduced at 22 U.N. GAOR, U.N. Doc. A/6695 (1974). The 1968 Resolution is found at G.A. Res. 2467A, 23 U.N. GAOR Supp. 18, U.N. Doc. A/7218 (1969). The Reports of the Committee on the Peaceful Uses of the Seabed and the Ocean Floor beyond the Limits of National Jurisdiction are at 25 U.N. GAOR Supp. 21, U.N. Doc. A/8021 (1970); 26 U.N. GAOR Supp. 21, U.N. Doc. A/8421 (1971); 27 U.N. GAOR Supp. 21, U.N. Doc. A/8721 (1972); 28 U.N. GAOR Supp. 21, U.N. Doc. A/9021 (1973). The four 1958 Conventions on the Law of the Sea adopted in Geneva are reproduced in 52 AM. J. INT'L L. 834, 842, 851, 858 (1958).

Elizabeth Mann Borghese, a representative of the International Ocean Institute, and distinguished authority on ocean policy, noted a disturbing imbalance among the committees.[87] The Second and Third Committees were concerned with the ocean space as a whole while the First Committee dealt only with the deep seabed. The problem lies in the fact that whenever the Second or Third Committee found it necessary to discuss the inevitable interaction between national and international zones they invoked an international authority supposedly being formed in the First Committee. In fact, no international authority was created in the First Committee, as it conceived its purposes more narrowly. In the Third Committee, which was to deal with pollution issues, "time and again, delegates referred to an 'Authority' which should conduct scientific research and be responsible for environmental controls—which, in the First Committee, limited as it was to seabed mineral extraction, simply did not exist."[88] Effective pollution control and conservation are not possible in the absence of such international authority.

The Third Committee produced a working paper compiling the results of their informal sessions. A review of the U.N. source documents yields the following summary of the Committee's agreed texts of draft articles. The Third Committee dealt with three areas: (1) Preservation of the marine environment; (2) scientific research; and (3) development and transfer of technology.

Agenda Item 12 (preservation of the marine environment) produced general articles making it obligatory for states to protect and preserve the marine environment, including an affirmative duty to prevent pollution and to prevent pollution from transfering to other areas. It was also agreed that states shall continue to have the right to exploit their own resources. A state's economic condition would be considered in determining whether it has complied with its duty to protect the marine environment.

In the areas of scientific research (item 13) and the development of technology (item 14) the general conclusions of the committee were: (1) that states should promote and facilitate the development of scientific research for themselves and others for peaceful purposes, as not to interfere with other legitimate uses of the sea, and in compliance with international regulations; (2) that such research shall not form the basis of any legal claim to any part of the marine environ-

87. Borghese, *Report from Caracas*, 7 THE CENTER MAGAZINE No. 6, Nov./Dec. 1974, at 28, 31.
88. *Id.* at 31.

ment; and (3) any research activity occurring within the jurisdiction of a coastal state will be subject to such state's control. Accordingly, articles were produced that require states to respect the principles of sovereignty and peaceful mutual benefit in their agreemnts. In addition, states must actively promote the flow of scientific data and information resulting from marine research.

The Third Committee delayed discussion on the issues of standards, jurisdiction and enforcement of anti-pollution articles to a later time. The Committee did agree on articles concerning technical assistance and on the obligation not to transfer pollution from one area to another. On scientific research, it agreed to articles on general principles for the conduct and promotion of research and on international cooperation.

Draft Article I declares that "[s]tates have the obligation to protect and preserve the marine environment." This article urges states to prevent, reduce, and control pollution within their own jurisdiction and to prevent or abate the spread of pollution to other jurisdictions. But this mandate is limited to the use of "best efforts." A state is held only to standards which it selects based on its evaluation of its economic resources. This limitation was a major issue at the conference. The developing countries insisted on a double standard for pollution control. They wish to be excused from the heavy economic burdens of keeping their coastal waters pollution free. They argue that a single standard will hinder the pace of their economic development; that countries which have already achieved industrialization have polluted the marine environment freely while developing their economies, thus achieving a "head start" which should not now be denied to developing countries. The developing countries favor placing the full burden of pollution control on the industrialized nations.

Any agreement reached must involve a "trade-off" between potential gross national product and rigorous pollution control measures. If preservation of the marine environment becomes an issue of overriding importance then Draft Article VI, which mandates technical assistance, could be employed to subsidize the developing countries in the area of anti-pollution technology. However, insistence by the developing nations that the industrialized nations carry the full burden of the cost of preserving the marine environment could prevent developed nations from agreeing to a treaty. A double standard would give developing countries a comparative advantage in the international commodity market since the production of the same or similar goods

would cost less. Each industrialized nation would bear not only the expense of its own pollution control, but also its portion of a subsidy to developing countries. Thus, the industrialized nations would be forced to subsidize their competition and lose trade in the international markets.

Most observers found the work of the Second Committee to be the most important. The basic concerns of the conference—the extent of the territorial sea and coastal state jurisdiction—were discussed there.[89] The rights of landlocked nations and dispute settlement procedures were also on the agenda of this Committee. However, none of the working papers resulting from this Committee represents a commitment towards a treaty. Dispute settlement was not even discussed.

A multitude of problems contributed to the inconclusive results of Caracas. They will be considered under two headings for purposes of analysis. First, the problems which underlie all such attempts at international negotiation; second, the problems peculiar to this attempt at ocean management, including problems generated by the structure and posture of the conference itself.

Jurisdiction over the oceans is the basic problem for the law of the sea. In any international negotiation, primary tension lies between national sovereignties and international needs. Although difficult to achieve, a nation's claims of jurisdiction should reflect that nation's accurate perception of its need and its own areas of special competence.[90] The two main jurisdictional choices at Caracas were administration of the seabed as the common heritage of mankind and increased jurisdiction of coastal states over adjoining waters. Since the law of the oceans is so complex, a jurisdictional choice by a nation that serves one of its needs may conflict with its other goals.

A coastal nation with the technology to exploit its offshore resources should favor increased jurisdictional capacity. But if the same nation is unable to develop the resources along its coast or has few resources there, it should support an international regime giving it an equal share in the proceeds from all ocean resources. Other things

89. *See, e.g.*, the unpublished typescript at 2 of the Speech by Arvid Pardo given October 24, 1974 at the Ocean Policy Conference of the School of Advanced International Studies, Johns Hopkins University, Airlie House, Arlington, Virginia, October 22-24, 1974 [hereinafter cited as the SAIS Conference].

90. Alexander, *Indices of National Interest in the Oceans*, 1 OCEAN DEVELOPMENT & INT'L L.J. 21 (1973). Alexander suggests an international agency which would make data available and require each nation to formulate and submit a National Marine Interests Policy. Nations would then be grouped for each issue, and differing jurisdictional schemes, appropriate for each issue, would be formulated.

being equal, a landlocked country could be expected to support the international regime. But other things are seldom equal. Such a country might be better served by alliance with a neighboring coastal state with plentiful resources. It then would favor any desire of its neighbor for expanded coastal jurisdiction. Most of the actual choices involve issues other than pollution and development.

The jurisdictional positions of the developing nations, especially in Africa and South America, differ, depending upon which resource is being considered. The developing nations want exclusive coastal rights over their fisheries resources, as well as a share of revenues from non-living resources. The developed countries, such as Japan and Russia, with their distant water fishing capacity, prefer an international regime, which would give them rights in the fisheries of other nations. The two concepts are in basic conflict. A nation cannot exert extensive coastal jurisdiction *and* share in the benefits of a worldwide regime.[91] Each nation must weigh its immediate needs against its future interests.

International law is based upon custom and express consent. In order to give any explicit powers to an international body, each member nation must consent, in its sovereign capacity, to deprive itself of the power it grants to the international body. Jurisdiction is a concomitant of sovereignty. Before a nation strips itself of any power, it seeks assurances that other participating nations will relinquish rights of equal value. But nations do not stand in an equal relationship to the oceans, geographically or historically. Many nations fear they will give up too much, others that they will gain too little. The unknown future of the oceans and of the earth as a whole, added to this fear, deprives nations of the ability to accurately predict future developments and to accurately appraise their own self-interests. Suspicion and paralysis are the inevitable result.

Custom, the other accepted basis for the growth of international law, is too slow, inflexible, and imprecise to solve the problems of the oceans. Because of the possibility of unilateral action and the deterioration of the ocean environment, authorities agree that new solutions are urgently needed. There is no time to wait for custom to solve the problems of the oceans. A further objection to customary law is that it does not represent the will of the majority, but en-

91. This argument is developed in Oda, *Towards a New Regime for Ocean Development*, 1 OCEAN DEVELOPMENT & INT'L L.J. 291 (1973).

trenches privileged power. Nations act unilaterally because of these deficiencies in international law.

The urgency of the problem did not lead to its resolution at Caracas. United Nations Ambassador Arvid Pardo of Malta, a Caracas delegate and a major originator of the concept of the sea as the common heritage of mankind, supplies this depressing list of shortcomings:

> [T]he large number of states participating . . . the misunderstandings and confusion generated by global diplomacy, the verboseness of the proceedings, unwieldy conference procedures, an agenda . . . which contains serious omissions and duplications, a defective conference structure . . . which encourages fragmented consideration of complex problems. Further major negative factors are time constraints, . . . the fact that few governments are in a position to draw appropriate conclusions from the growing inter-relationship of major ocean uses and the . . . importance attributed by Governments to the achievement of [contradictory] short term objectives.[92]

The consensus is that every nation fears each other's unilateral action.

Wolfgang Friedmann, an authority on international law, finds that every passing year diminishes the prospect of innovative international management of the oceans.[93] He fears that land patterns of exclusive nationality will repeat at sea. Impatience amounting almost to despair of the possibility of solving these problems by international means has already lead to unilateral actions by some nations, most notably Canada.

In this context, one can only be alarmed by the opinion of Borghese that the necessary establishment of an ocean's regime is a "long and profoundly revolutionary process. It will take years."[94] The most eloquent statement of the concern for the deterioration of the environment is that of Garret Hardin in *The Tragedy of the Commons*:[95]

92. Pardo, *supra* note 89, at 35.
93. W. FRIEDMAN, THE FUTURE OF THE OCEANS (1971).
94. Borghese, *supra* note 87, at 27.
95. Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244-45 (1968).

> Each man is locked into a system that compels him to increase his herd (or holding) without limit,—in a world that is limited. Ruin is the destination to which all men rush, each pursuing his own best interest . . . . Freedom in a commons brings ruin to all . . . . The individual benefits as an individual from his ability to deny the truth even though society, of which he is a part, suffers . . . . The oceans of the world continue to suffer from the survival of the philosophy of the commons. Maritime nations still respond automatically to the shibboleth of the "Freedom of the Seas." Professing to believe in the "inexhaustible resources of the oceans" they bring species after species . . . closer to extinction.

The Law of the Sea negotiations have been strongly influenced for some years by blocs or coalition of nations, most notably the "Group of 77," now numbering almost 100 "third world" countries of Africa, Asia and Latin America. The "Group of 77" contains several smaller factions, however, and alignments are subject to change. Regional groupings may represent a new source of influence in ocean policies.

Roger D. Hanson, Fellow, Overseas Development Council, discerns the following blocs at Caracas: developed nations vs. developing nations; landlocked and/or shelf-locked nations vs. coastal nations; resource rich nations vs. resource poor nations; naval vs. commercial maritime nations; and nations with high technology vs. those whose technology is low.[96] These classes of nations cluster in varying patterns around such disparate issues as: the territorial sea, freedom of passage through international straits, economic (or patrimonial) zones, deep seabed regimes, various fishing regimes, pollution regimes and scientific research issues.[97] Many developed coastal states will accept a 200-mile economic zone, while developed landlocked countries prefer limited territorial seas and a strong international authority. Distant water fishing countries want an international authority which would give them preferential rights to fish in other

96. *North-South Split and the Law of the Sea Debate: The Dominant Pattern?* Preliminary typescript of paper read October 22, 1974 at the SAIS Conference, *supra* note 89.

97. *Id.* at 12. In another paper read Oct. 22, 1974 at the SAIS Conference, J.S. Nye sees two potential coalitions; one of coastal, one of maritime nations. Nye, *Oceans Rule Making in a World Policy Perspective,* unpublished typescript, at 44.

waters. For this reason, Japan is far more willing to grant broad powers to an international authority than is the United States.

The less-developed countries are mainly united by ideology. Their resources and needs differ so radically that Hanson does not see how they can be served by any one ocean policy. A Deep Seabed Regime, favoring landlocked and poorer countries, could harm countries that are economically and technically developed. Hanson sees the rhetorical force of shared ideas as too weak to withstand an individual country's desire for development benefits.

Choon-Ho Park, a delegate to Caracas from South Korea, presents a slightly different view of national alignments at Caracas.[98] He views the "third world" countries as attempting to unite behind the banner of China as their representative. Yet, he points out, China is rich in mineral resources which she is not able to develop at present. She also occupies a region of the globe far from the countries whose ideologies she shares. These two factors would make shared ideals a weak bond.

Some additional difficulties with the negotiating procedure at Caracas are emphasized by other delegates to the Law of the Sea Conference. Since Caracas was a public negotiation, the various national representatives there were mainly concerned with saying what their constituents wanted to hear. This tends to obscure and oversimplify the issues. The Law of the Sea Conference at Caracas is a definite contrast to the pragmatic approach taken in the 1958 Geneva Conference, which resulted in conventions on the high sea, continental shelf, territorial sea and contiguous zone, and fishing. These conventions were the result of work by the staff of the International Law Commission, which was primarily composed of scholars, lawyers and technical experts. The Geneva working groups met privately and simply presented the results to nations for comment.

At Caracas many nations were engaged in gathering information, but basic negotiating strategy forbids a nation to declare its position. This may give a strategic advantage to other nations who have remained silent or disguised their interests. Thus candor and clarity are ruled out, and with them, any possible progress toward meeting the needs of the world, the oceans, or any nation or group of nations. Private negotiation between persons able to weigh technical issues

98. Speech by Park, at Conference entitled The Great Oceans Controversy: Collision or Cooperation, October 24, 1975, San Francisco, California.

and empowered to make genuine concessions for their governments would be superior to the Caracas debacle.

A note of cautious optimism is sounded by some observers and documents, despite the many negative indications catalogued above. The LOS telegram repeatedly indicates that the nations are now moving closer together.[99] Pardo also predicts that a treaty will be concluded in 1976. He feels international diplomats will not admit to failure after eight years of effort, especially where the failure would endanger the prestige of the United Nations.[100] He discerns primary goals on which nations still wish to reach an agreement: the wish of coastal states for recognized extensive jurisdiction and comprehensive powers within their jurisdiction, and the wish of all states for assurance of normally unhampered commercial navigation.

Pardo is pessimistic about the treaty he envisions. He feels that the agreement will not be comprehensive because the nations want only immediate simple objectives. Imprecision would increase rather than diminish conflicts between states. The failure to create an international administrative body for the oceans will increase the inequalities between states, further fragmenting the world community. The increased trend toward coastal state jurisdiction will hamper the possibilities for effective international cooperation, and eventually cause the commons of the high seas to disappear into extended national control.[101]

Predictions for the future development of the Law of the Sea seem to offer two alternatives: Ultimate failure to achieve a treaty, or conclusion of a treaty which further fragments the world community.

VI. ALTERNATIVES TO A WORLD OCEANS TREATY

Unilateral Action

Governments concerned about ocean management see good reasons to act promptly. Canada, discouraged and frustrated by attempts to act upon an international level, recently acted unilaterally to regulate vessel source pollution in the Arctic. Canada took jurisdiction to within 100 miles from her coastline, and provided severe penalties including fines up to $5,000 per day and strict civil liability for any polluting activity. The act also enables pollution preventing offi-

99. LOS Telegram § 1 at 3, § 2 at 1, § 3 at 3, § 6 at 3.
100. Pardo, *supra* note 89, at 35-36.
101. *Id.* at 40, 45-49 *passim.*

cials to seize ships and cargo anywhere upon reasonable suspicion of pollution. These penalties exceed anything considered previously. They may represent the only effective deterrent to pollution in force in international law.

Canada asserts that, under the principle of protection and self-defense, it took the only practical course available to achieve its lawful purpose. Mitchell Sharp, Canadian Secretary of State for External Affairs, stated that "existing international law is either inadequate or non-existent in this respect."[102] Canada also asserts that such state practice often leads to customary rules of international law since such unilateral action in the name of national interest often results in acceptance by other nations.[103]

At the Conference on Ocean Policy held in San Francisco on October 24, 1974, an off-the-record statement held that unilateral action such as Canada's was the greatest hope for pollution control. The failure of any treaty would open the way for strict penalties imposed by pollution conscious nations; measures much stronger than could be hoped for internationally. Nations wishing to navigate in waters controlled by such laws would be forced to comply promptly with the standards set by the laws, thus raising the world-wide standard of pollution prevention higher in a shorter time than would a treaty. An additional advantage is that national legislation is more effective and efficient than cumbersome international negotiation.

H. Gary Knight, Professor of Marine Resources Law at Louisiana State University Law Center, sees properly drafted unilateral domestic legislation as an alternative method for securing order in the oceans.[104] He advocates the adoption of legislation structured so that adoption by other nations could lead to an acceptable international legal framework for the use and exploitation of the oceans. Such legislation would have to be sensitive to both domestic and foreign interests. It should premise jurisdiction upon theories of reasonable use or regulation instead of asserting it aggressively, and should require consultation with IMCO where appropriate. Knight notes that pollution problems are not well served by this approach because the absence of international standards forces nations to base legislation on an assertion of coastal state jurisdiction.

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102. 9 CANADIAN YEARBOOK OF INT'L L. 285 (1971).
103. The Canadian material refers to 38 ALBANY L. REV. 921-42 (1970) and 69 MICH. L. REV. 1-37 (1970).
104. Knight, *Treaty and Non-Treaty Approaches to Order in the World Ocean*, unpublished typescript of talk given October 23, 1974, at the SAIS Conference.

Unilateral action, on the Canadian model primarily, may be the only hope for pollution control in the oceans. But ultimate legitimation and compliance by other nations depends upon the slow imprecise formation of customary law. An international treaty should be precise to insure promptness of response, compliance and enforcement procedures. These advantages are lost by unilateral action, and the disadvantages of conflict and confrontation are increased.

Regionalism

Caracas may illustrate the principle put forth by Professor Roger Fisher that "governments will typically postpone a decision unless there is some good reason not to."[105] Its inconclusive and indefinite results suggest that some other forms of ocean management need to be considered. Cooperation among nations on a regional basis has often been suggested as an alternative.

Many negative statements regarding regionalism presently emanating from persons involved with the problems of the oceans may represent a hope that there be some other way since the prospects for successful international cooperation seem dim. However, some proposals for regional oceans authorities exist at present. For example, the *Agreement for Cooperation in Dealing with Pollution of the North Sea By Oil* was ratified by eight North Sea States.[106] It divides the North Sea into eight zones, two of which are under joint responsibility: Belgium, France and the United Kingdom in one zone, and France and the United Kingdom in the other zone. The signatories have agreed to inform each other of "threatening oil pollution situations." Specific action to control such situations is to be conducted bilaterally. Regional conventions for the Baltic Sea, the North-East Atlantic and the Mediterranean regarding land-based pollution were prepared for the Caracas conference.[107]

Borghese also sees some possibility for regional representation emerging from Caracas. She discerned a significant trend toward regional organization in the First Committee, which structured itself into five regional groups: Latin America, Asia, Africa, Eastern Europe, and Western Europe and other states. These groups were allocated nine representatives each. The committee also included

105. FISHER, INTERNATIONAL CONFLICT FOR BEGINNERS 21 (1969).
106. 9 INTERNATIONAL LEGAL MATERIALS 359 (1970). The same nations have also entered into a regional agreement to control ocean dumping.
107. Rotkirch, *Claims to the Ocean,* 16 ENVIRONMENT No. 5, June, 1974, at 41.

five additional members who had introduced major proposals. Borghese states:

> It is now practically conceivable that the Council of the Seabed Authority may be constructed on the principle of regional representation, although the concept of "region" would need considerable refinement in such a case.[108]

Borghese's hopes are supported by Michael Hardy, the Legal Advisor to the Commission of the European Communities, who feels that a strong case can be made that "what has occurred so far represents a triumph of the regional approach to world affairs."[109] He refers to the diplomacy of the Latin American countries, in gaining the cooperation of the African and Asian Groups in the United Nations on the international seabed issue. His primary example of a "regional approach to the law of the sea which forms part of a wider process of regional integration"[110] is the European Economic Community. Primarily economic in orientation, and receiving its mandate and authority from the Treaty of Rome, the EEC has promoted a wide measure of agreement and cooperation on ocean issues. To deal with marine pollution, the EEC has evolved a program covering pollution at sea from transport, ocean dumping, exploitation, and land-based sources of pollution. It allows for action by the Committee as a whole, joint action by members within other international organizations, and conferences among individual states leading to international measures.

Hardy's view that regional approaches are also strongly developing in Latin America and in Africa receive strong support from authorities in those regions. F.V. Garcia-Amador, Director of the Department of Legal Affairs of the Organization of American States, views the Latin American assertion of extensive coastal jurisdiction as a regional phenomenon, despite the many individual proclamations asserting it.[111] F.X. Njenga, Counsellor of the Kenya Mission to the United Nations, outlined some regional approaches taken by both the African coastal nations and by the landlocked African nations.[112]

108. Borghese, *supra* note 87, at 28.
109. Hardy, *Regional Approaches to the Law of the Sea Problems, the European Community*, at 2, unpublished typescript of paper read October 22, 1974 at the SAIS Conference.
110. *Id.* at 4. *See also* Janis, *The Development of European Regional Law of the Sea*, 1 OCEAN DEVELOPMENT & INT'L L.J. 275, 275-89 (1973).
111. Garcia-Amador, *The Latin American Contribution to the Development of the Law of the Sea*, 68 AM. J. INT'L L. 33 (1974).
112. Unpublished typescript of statement by Njenga, Oct. 22, 1974, SAIS Conference.

A counter-indication to Borghese's hope, however, is that some of the member nations of the First Committee emphasized that the "composition of the group should not constitute a precedent for future bodies." More importantly, they stated their conviction that membership was not in accord with "the principle of equitable geographical distribution."[113] There is no accord as to what such a principle of equitable geographical distribution might be. Unfortunately, questions unanswered on the international level are unanswered for regionalism also.

Many authorities favor a regional solution for management of the living resources of the sea. The problems for each nation inherent in attempts to conserve the sea's living resources, and to control pollution harmful to such resources, can only be solved effectively in a regional context. The life patterns of migratory species, for example, take place without regard for national boundaries and political alignments. Effective conservation measures must be able to respond to these patterns. Regional management of the oceans isolates the landlocked countries even further, but this too may best be solved bilaterally or regionally, rather than in an international forum. The greatest disadvantage of international ocean management is that it would not be responsive enough to geographic, biological, or geological factors because it is too closely tied to political and economic forces. The same disadvantages could occur in a regional framework. Yet political forces might be controlled by a sense of regional unity and economic integration.[114]

The various international fisheries agreements represent some functioning examples of international cooperation of a regional scope. Albert W. Koers, an authority on fisheries agreements, states:

> Much of the international debate on these issues is concerned with the need to establish new international structures for organized decision-making with respect to the exploration and exploitation of the sea and its resources. International fisheries organizations represent the only experience with such decision-making within the international community.[115]

The existence of such organizations is almost totally a response to necessities and crises. "In the international community necessity is still the supreme lawmaker."[116]

113. Borghese, *supra* note 87, at 37.
114. *See* Nelson, *supra* note 24.
115. A. KOERS, INTERNATIONAL REGULATION OF MARINE FISHERIES 36 (1973).
116. *Id.* at 37.

Most of the organizations have only advisory status. Generally, they engage in research and monitoring and make recommendations to the member nations. Of the twenty-odd organizations discussed in Koers' study, only four have any capacity to make decisions binding upon either the member nations or upon fishermen using the fisheries concerned. Even enforcemnt of any regulations is conducted upon an advisory basis, with the member nations having the authority to take action independent of the recommendation. Power to make binding decisions must be conferred by member states by the same derogation of their individual authority as is needed in the full international arena. The reluctance of nations to grant such power is no less in the regional context. In fact, one dilemma of such a grant is even more apparent in the regional setting. Member nations may bind themselves equally to honor and enforce pollution measures, and may do so. But the action, or inaction, of nations outside the organization may still make the measure ineffective. Thus concerned nations may hamper and restrain themselves, honor their agreement, and still be powerless to solve the problem. On the international level, this becomes a more generalized fear that other nations will sacrifice less; or will fail to comply and not be detected. On neither level do sovereign nations trust one another.

The existing organizations can at least take advantage of the alternate basis of international law, that of custom. They do represent a tradition of international cooperation, however limited. The organizations which also engage in research have an amusing advantage, "the existence of a permanent research staff is one of the most important aspects: if a commission has a staff, it acquires a degree of permanency which enhances its status under international law."[117] But research done by one commission often lacks credibility for the international community at large.

Existing fisheries organizations are extremely limited in scope; many deal only with one species of fish. Extension of their scope or authority would lead to the same problems noted at Caracas—the reluctance of nations to give up their sovereignty in an uncertain context. It appears that the international community must choose between entrusting its future to individual states or international institutions. The process of choice is distorted because international institutions can only be strengthened if individual states are willing to question their own viability as the final structural elements of the world community.

117. *Id.* at 162.

> In the past, choices between the two alternatives were made by States on the basis of necessity, rather than on the basis of desirability and free choice. States have demonstrated over and over again that they are willing to yield authority to international institutions only if this becomes unavoidable . . . the resources of the planet may be harmed beyond repair before States see the necessity to act collectively.[118]

Thus regional organization seems to offer the same difficulty as an international organization upon a slightly smaller scale. The advantages of regional cooperation, such as great responsiveness to biological and ecological factors, may not be impossible to incorporate into an international structure. But the disadvantages, such as the adverse effect upon one region by another region's acts, and the denial of credibility to another region's scientific findings, seem to require recourse to international organization for resolution. The chief difficulty of both forms is the same: the reluctance of individual nations to give up sufficient sovereignty so that effective action and enforcement are possible.

CONCLUSION

Marine pollution control requires international implementation and sanctions. The Caracas conference did not achieve them. The status of marine pollution remains unchanged in the international forum, and the likelihood of its control is as remote as before the conference. Some hope lies in the continuation of the Law of the Sea Conference in Vienna in 1975, and again in Caracas in 1976. However, individual nations will still be discouraged and impatient with the sluggish international process. Increased unilateral action may result. Marine pollution control will probably fall victim to expanded claims of ocean jursidiction by the individual nations. International authority and freedom of the seas may therefore disappear altogether. The ultimate victim of such an occurrence would probably be the ocean ecology which unilateral action would be designed to protect.

118. *Id.* at 274-75.