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INTERNATIONAL LAW AND THE PROTECTION
OF THE OCEANS FROM POLLUTION

LUDWIK A. TECLAFF*

We believe that the damage done to the ocean in the last 20 years is somewhere between 30 per cent and 50 per cent, which is a frightening figure.

In publication, in conferences, in international units the matters are generally divided into air pollution, land pollution and water pollution. In fact, there is only one pollution because every single thing, every chemical whether in the air or on land will end up in the ocean.¹

I. FREEDOM OF THE SEA AND POLLUTION

ALTHOUGH there has been localized concern with the problem of pollution since at least the sixteenth century,² the recognition of water pollution as a problem of global dimensions is of relatively recent origin and is only now beginning to find legal expression.³ It would seem

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2. The history of pollution laws in England, for example, dates back to the City Air Corruption Act, 12 Rich. 2, c. 13 (1388). The reign of Henry VIII was notable for a number of anti-pollution measures enacted between 1531 and 1543. E.g., An Act for the Preservation of the River Severn, 34 & 35 Hen. 8, c. 9, §§ 1, 2, 6 (1542-43) (attack on the dumping of ballast and rubbish from vessels in navigable waters); Bill for the Preservation of the Havens in Devon and Cornwall, 27 Hen. 8, c. 23 (1535) (measures aimed at preventing the Cornish and Devon ports from being choked with tin mining debris); Bill for the Preservation of the River Thames, 27 Hen. 8, c. 18 (1535) (fine of 160 shillings for polluting the Thames); Bill of Sewers, 23 Hen. 8, c. 5, § 3 (1531) (commissioners of sewers given the duty, inter alia, of keeping sewers and ditches clean).

3. It is only within the last 15 years that the International Law Institute and the International Law Association, the two major associations of international lawyers, have dealt comprehensively with the pollution of international streams. See 49 Annuaire de l'Institut de Droit International (II) (Ann. Inst. dr. i.) 370-73 (1961); Comm. on the Uses of the Waters of Int'l Rivers, Int'l Law Ass'n, Report of the Fifty-Second Conference 478 (1966). The formulation of rules of global application must await the 1972 Conference on the Human Environment and the 1973 Conference on the Law of the Sea. Marine pollution has been suggested as one of the major items on the agenda of the 1972 Conference. See Comm. on Int'l Environmental Affairs, U.S. Dep't of State, Pub. No. 8603, Suggestions Developed Within the U.S. Government for Consideration by the Secretary General of the 1972 UN Conference on Human Environment 52 (1971).
that the regulation of pollution must wait until the value of the interests adversely affected substantially outweighs the convenience of a body of water as a dumping place for refuse. If this is so, it would at least partly explain why international solutions have lagged behind domestic ones, why the first conventional anti-pollution rules concerning the oceans did not appear until the middle of the twentieth century, and why no specific customary rules in this field have ever emerged. Although the actual volume of the oceans is very small in comparison to the volume of the earth, the seas do cover more than two-thirds of the earth's surface. It is little wonder, therefore, that until man reached the present level of industrial civilization he did not perceive that any of his activities could produce detrimental changes in the composition, content, or quality of seawater.

Until specific customary rules do emerge the only limitations on pollution, apart from conventions, must be sought in or deduced from rules regulating the use of the oceans in general. Pollution of the sea is not itself a use—it is a modality or consequence of a use. As such, it is a factor which can make any use permissible or impermissible. Even if a use becomes accepted and established, it cannot be exercised without regard to the welfare of other users. Thus, under the theory that only recognized uses of the sea are permissible, pollution resulting from any

5. Article 2 of the Geneva Convention on the High Seas perhaps unwittingly embodies this view, since it requires that uses of the sea other than the four enumerated freedoms of navigation, fishing, laying submarine cables and pipelines, and flying over the high seas be recognized by the general principles of international law. Only approved uses would then be allowed and since the convention does not define the general principles of international law, the conclusive test of approval would be evidence that a particular use and the mode of its exercise have become a rule of customary law. Convention on the High Seas, done April 29, 1958, [1962] 2 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82 [hereinafter cited as Convention on the High Seas].

Professor Bos, although rejecting this interpretation of article 2, admits its possibility by saying: "Ma seconde observation se rapporte au fardeau de la preuve que cette interprétation imposerait à quiconque voudrait soutenir l'existence d'une liberté additionnelle. Vollà un aspect vraiment inquiétant de cette façon de voir, aspect revenant à une interdiction de toutes activités en haute mer dont on serait incapable de prouver la reconnaissance par les principes généraux du droit international. La liberté de la haute mer serait ainsi réduite à des libertés prouvées." Bos, La Liberté de la Haute Mer: Quelques Problèmes d'Actualité, 12 Netherlands Int'l L. Rev. 337, 344 (1965) (italics omitted). Similarly, the Netherlands government, in the controversy concerning pirate broadcasting, came close to this view by distinguishing between protected and non-protected uses. The view of the Dutch government has been summarized as follows: "Limitations on the exercise of the four classic freedoms are not easily to be presumed but may result from specific provisions contained in the Geneva and similar conventions. The views of the Government seem to imply that the exercise of the
one of these uses would be prohibited if it unreasonably interfered with other uses or users of the oceans.\textsuperscript{6} Similarly, under the theory that permits any uses of the oceans as long as they are exercised in a reasonable fashion for peaceful purposes,\textsuperscript{7} there must come a point when the detrimental effect of pollution reaches a level which condemns that use or its exercise as unreasonable. However, a great deal of pollution might be permissible before such a point is reached if the detrimental effect of a use, no matter how substantial, is outweighed by other considerations, such as defense. When the immediate political fate of a nation is weighed against the future of the human species, uses concomitant with political survival, even though they threaten the long-term existence of mankind, may win acceptance as reasonable.

More pollution would seemingly be allowable under the open-ended reasonableness theory than under the recognized-use theory, since more uses would be permitted. Obviously, neither theory gives an a priori criterion for deciding if and when changes in water quality should be prohibited. Such a criterion must be ascertained in each particular instance.

It is doubtful whether a more precise criterion could be obtained by examining local water pollution rules in the major legal systems for the purpose of establishing the existence of a general principle of law and hence a principle of international law regarding pollution of waters. This is due to the fact that in municipal law the detrimental effect of changes in water quality is in many instances weighed against other redeeming factors before the activities producing this effect are condemned.\textsuperscript{8} On the other hand, if it could be shown that any change in

\begin{itemize}
  \item other recognized freedoms is subordinate to the classic freedoms, as may be seen from Articles 4 and 5 (par. 1) of the Convention on the Continental Shelf. As far as still other uses of the high seas are concerned, their permissibility under international law should be judged by their utility for, or interference with, the traditional uses of the high seas and by the test of reasonableness." van Panhuys & van Emde Boas, Legal Aspects of Pirate Broadcasting, 60 Am. J. Int'l L. 303, 314 (1966) (footnote omitted).
  \item For example, in those states of the United States (mostly east of the Mississippi)
water quality detrimental to health, property, or the marine environment is altogether incompatible with freedom of the seas, then a really precise rule would emerge in international customary law. The International Law Commission could perhaps be interpreted as urging the prohibition of any degree of pollution when it stated in a comment to article 27 of its final draft convention on the law of the seas: "States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States." The commission's statement, however, being in the form of comment, has no more than persuasive effect and cannot be taken as an expression of law. Efforts to transfer it to the text of the 1958 Geneva Convention on the High Seas were unsuccessful. Article 2 of that convention stated in its final paragraph:

These freedoms, and others which are recognized by the general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.

The convention thus falls back on the test of relative unreasonableness in order to determine whether a use is permissible or not. It would seem that the effort to interpret the meaning of freedom of the seas for the purpose of finding rules bearing on pollution leads either to almost total permissiveness or total prohibition. International customary law at its present level of development is thus an unsatisfactory tool for controlling pollution of the oceans. The task must be left to the conventions.

II. ANTI-POLLUTION CONVENTIONS

As the twentieth century entered its third decade, with vast increases in the use and the carriage of oil in waterborne transportation, oil slicks became a noticeable feature of ocean waters. The United States, which follow the reasonable use version of the riparian theory, pollution is only a factor which determines the reasonableness of use. See, e.g., Montgomery Limestone Co. v. Bearden, 256 Ala. 269, 54 So. 2d 571 (1951); Roughton v. Thiele Kaolin Co., 209 Ga. 577, 74 S.E.2d 844 (1953); Ravndal v. Northfork Placers, 60 Idaho 305, 91 P.2d 368 (1939); Satren v. Hader Co-op. Cheese Factory, 202 Minn. 553, 279 N.W. 361 (1938); Kyser v. New York Cent. R.R., 151 Misc. 226, 271 N.Y.S. 182 (Sup. Ct. 1934); Sumner v. O'Dell, 12 Tenn. App. 496 (1930). The Restatement of Torts states this rule generally: "Unless he has a special privilege, a riparian proprietor on a watercourse or lake who, in using the water therein, intentionally causes substantial harm to another riparian proprietor theron through invasion of such other's interest in the use of water therein, is liable to the other in an action for damages if, but only if, the harmful use of water is unreasonable in respect to the other proprietor." Restatement of Torts § 851 (1939). The rule is further stated: "A riparian proprietor's use of water is unreasonable, under the rule stated in § 851, unless the utility of the use outweighs the gravity of the harm." Id. § 852.

was the first nation to realize the dangers of oil pollution, had pressed for a radical solution that would altogether prohibit oil discharge from ships.\(^\text{11}\)

It was hopelessly ahead of its time. The conference which convened in 1926 in Washington, D.C., on the initiative of the United States, produced a draft convention which merely permitted states to establish zones near their coasts within which the discharge of oil would be barred.\(^\text{12}\) Nothing came of these proposals at that time, but they did establish a framework for future measures against oil pollution. Thus, when a convention was finally concluded in 1954—this time on British initiative—it incorporated the zonal concept,\(^\text{13}\) postponing to the future a total prohibition of oil discharge anywhere on the oceans. What is more, even in the zones established the convention did not prohibit oil discharge altogether, but merely reduced the amount of permissible discharge and provided for its control.\(^\text{14}\) Enforcement was left in the hands of the state of registry.\(^\text{15}\) To this end, states were required to provide equally severe penalties for unlawful oil discharge outside their own territorial waters as within them.\(^\text{16}\) States other than the state of registry could inspect a ship's oil record books only when it was in their ports and, if irregularities were found, they could or should notify the state of registry for a proceeding according to the convention.\(^\text{17}\)

In 1962 a subsequent amendment to the convention still refused to face the problem in its totality and merely made the prohibitions on oil discharge somewhat more stringent.\(^\text{18}\) The system of prohibited zones was extended outward to 100 miles in most areas (150 miles in the case of Australia). In addition, new ships, \(i.e.,\) ships of more than 20,000 tons begun after the effective date of the revision, were forbidden to discharge even outside the prohibited zones, except in special circumstances.\(^\text{19}\) Not

\(^{11}\) See Shepheard & Mann, Reducing the Menace of Oil Pollution, 31 Dep't State Bull. 311 (1954). See also 4 M. Whiteman, Digest of International Law 690 (1965).


\(^{14}\) Id.

\(^{15}\) Id., art. X.

\(^{16}\) Id., art. VI.

\(^{17}\) Id., art. IX.


\(^{19}\) Id., art. III, annex A.
until 1969, with a further amendment to the convention voted by the assembly of the Intergovernmental Maritime Consultative Organization (IMCO), were measures against oil pollution brought almost—but not quite—to the goal set initially by the United States in the early 1920's.\textsuperscript{20} The new amendment dispensed with zones and, instead, limited the rate of discharge of oil or oily mixture for ships other than tankers anywhere to no more than 60 liters per mile and to an oil content of less than 100 parts per one million parts of the mixture.\textsuperscript{21} The discharge was required to be made as far as practicable from land. The somewhat more stringent requirements for tankers limited the total quantity of oil discharged on a ballast voyage to one-fifteen-thousandth of the total cargo-carrying capacity, and required the tanker to be more than 50 miles from the nearest land.\textsuperscript{22} Tankers under 500 gross tons, however, were still left totally exempt.\textsuperscript{23}

The 1954 Convention, by concentrating on only one form of pollution, seems to have established a pattern for dealing with this problem which was followed by the 1958 Geneva Convention on the High Seas.\textsuperscript{24} This convention also did not deal with pollution generally, but instead affirmed a duty to control particular types of pollution which, according to the law of the sea, states already had for all pollution. Thus it established a duty for all states to draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines.\textsuperscript{25} In drawing these regulations, states were to take into account the existing treaties on the subject.\textsuperscript{26} A state whose provisions fell below the requirements of the 1954 Convention would now be violating international law if it were a party to the 1958 Geneva Convention on the High Seas even if it were not a party to the 1954 Convention as amended. But, since article 24 of the 1958 Convention does not set any standards and there are no applicable standards of international customary law, it would be difficult to ascertain, short of their complete absence, whether or not a state's regulations concerning oil pipelines were adequate, and, therefore, whether or not that state was discharging its obligations. It would seem that any reasonable regulations would meet the requirements.

Another type of pollution which states are required to prevent by the

\textsuperscript{20} For the text of the completely amended convention, see 9 Int'l Legal Materials 1 (1970).
\textsuperscript{21} Id., art. III(a), at 3.
\textsuperscript{22} Id., art. III(b), at 4.
\textsuperscript{23} 1954 Convention, art. II.
\textsuperscript{24} See note 5 supra.
\textsuperscript{25} Convention on the High Seas, art. 24.
\textsuperscript{26} Id.
enactment of appropriate measures is that arising from the dumping of radioactive waste.\textsuperscript{27} Dumping itself is not generally prohibited by international law until it unreasonably affects other uses and, because of the long practice of states, may even be considered an accepted use itself.\textsuperscript{28} Since there are no generally accepted standards, nor are any provided by the 1958 Geneva Convention, and since the point at which radioactive pollution becomes unreasonable cannot be established easily without them, the dumping of nuclear waste into the oceans has been indulged in by such nuclear powers as the United States and Great Britain. In England, for example, radioactive liquids from the Windscale Works in Cumberland have been discharged into the sea through a pipeline extending about three kilometers beyond the high water mark.\textsuperscript{29} In the United States dumping persists, but on a greatly reduced scale.\textsuperscript{30}

The perils of nuclear pollution and the need for comprehensive regulation leading to speedy total elimination are underscored by the 1962 Convention on the Liability of Operators of Nuclear Ships, which imposes strict liability with a moderately high ceiling.\textsuperscript{31} However, this merely focuses on mitigation after the fact. A step toward curbing the pollution itself was made in 1963 when the Nuclear Test Ban Treaty was concluded, but since not all the countries possessing nuclear capacity are parties to the treaty, the potentiality for harm remains.\textsuperscript{32}

While the 1958 Geneva Convention attempts to regulate the dumping of radioactive wastes, it altogether omits dumping of other toxic materials which, in the aggregate, may have equally, if not more devastatingly, harmful effects. In most industrialized countries, where streams have long since lost their capacity to absorb wastes, heavy concen-

\textsuperscript{27} Id., art. 25.

\textsuperscript{28} Council on Environmental Quality, Ocean Dumping, A National Policy 35 (1970). "The right to dispose of waste materials in the high seas is a traditional freedom of the seas. However, under the standards set out in the Geneva Convention on the High Seas, this freedom—like all other freedoms of the seas—must be exercised with reasonable regard to other states' use of the oceans." Id.

\textsuperscript{29} See 4 M. Whiteman, supra note 11, at 611-12.

\textsuperscript{30} According to the Council on Environmental Quality, the number of radioactive containers disposed of at sea within the past decade has fallen from 6,120 in 1962 to zero in 1968, 26 in 1969, and 2 in 1970. Council on Environmental Quality, supra note 4, at 7, table 10.


trations of pollutants are released into the bordering seas. The cumulative impact on plant and animal life is magnified by the food chain with such marked effect as to visibly bring home the finiteness of the oceans. Furthermore, the ocean has become a favorite repository of wastes from the land via direct dumping. Neglect of the problem of ocean dumping in existing conventions is to be remedied in the near future. In preparation for the Conference on the Law of the Sea to be convened by the United Nations in 1973, the United States has submitted a draft convention on the regulation of ocean dumping which would impose on states a duty to regulate dumping by permit and would limit a state's discretion to issue permits when unreasonable pollution would

33. A considerable amount of literature is accumulating on this subject. See, e.g., O'Sullivan, Pollution by Industrial Waste and Sewage: Scientific Aspects and some Problems of Control in the Marine Environment, in The David Dawes Memorial Institute of Int'l Studies, Water Pollution as a World Problem 143-51 (1971); Man's Impact on the Global Environment, Report of the Study of Critical Environmental Problems (SCEP) 131 (1970) (Transport of DDT Residues to the Marine Environment); id. at 146 (Estuaries and Coastal Ocean Areas); id. at 152 (Sampling the Marine Environment). Ironically, some of the pollutants which find their way into the sea from the land may be returned from the sea to the air and thence back to the land in rainwater—a complex example of global pollution dynamics. See Lundholm, Interactions Between Oceans and Terrestrial Ecosystems, in Symposium—Global Effects of Environmental Pollution 195 (S. Singer ed. 1970).

34. For example, in one year alone (1968) more than 48 million tons of various types of wastes were dumped into the waters around the United States—23.8 million into the Atlantic; 15.9 million into the Gulf of Mexico; and 8.3 million into the Pacific. Dredge spoils make up about 80 percent of the total by weight, and of those which are dumped into Atlantic waters, 45 percent are estimated to be polluted. For the Gulf and Pacific coasts the percentages of polluted spoils are 31 and 19 respectively. Of the other types of wastes disposed of at sea, industrial wastes account for 10 percent of the total, sewage sludge for 9 percent, and construction debris, solid wastes and explosives for fractions of a percent. See Council on Environmental Quality, supra note 4, at 3, tables 2 & 3. The difficulty of controlling this kind of pollution is shown by the recent statement of the administrator of the United States Environmental Protection Agency: "Current regulatory activities and authorities are not adequate to handle the problem of ocean dumping. States have not exercised extensive regulatory authority. Furthermore, their authority extends only within the three-mile territorial sea, and most ocean dumping occurs outside of these waters. The Corps of Engineers has some regulatory authority over ocean dumping, but such authority is subject to severe limitations. EPA has no authority under the Federal Water Pollution Control Act to control ocean dumping. Furthermore, the general thrust of that Act is the control of continuous discharges which violate water quality standards, rather than control of intermittent dumping. The Coast Guard has enforcement capability but no independent authority to control ocean dumping. The AEC's authority is limited to controlling the disposal of radioactive materials." 1 BNA Environment Rep. 1277, 1280 (1971).


result. Each state is to establish its own criteria for permissible dumping. As an interim measure this is probably inevitable, but as a permanent solution it is clearly inadequate. The task should eventually be transferred to an international organization or agency.

The only other type of pollution with which the 1958 Geneva Convention on the High Seas deals in the same general way as oil pollution is that arising from exploitation of the seabed. This is a fairly recent source of pollution, but one with an almost unlimited potential for harm. The era of seabed exploitation was ushered in some three decades ago, as technology evolved to extract the oil which was being discovered beneath shallow coastal waters. Recognizing the opportunities presented by this development, the United States, in the Truman Proclamation of 1945, introduced a claim of dubious theoretical value, but of undoubted practical merit, to an exclusive right of coastal states to exploit the continental shelf, i.e., the seabed of indefinite and varying extent adjacent to coastal states. Since the Truman Proclamation opened to the states a new frontier for expansion, it was accepted without protest, with all doubts or objections which might stem from the venerable principle of freedom of the seas being brushed aside. The exclusive claim to exploitation of the continental shelf by the coastal states was put into practice with such alacrity and enthusiasm that it probably became part of customary international law even before it was sanctioned by the 1958 Convention on the Continental Shelf.

37. Id., art. III(b).
38. Id., art. III(c).
39. Convention on the High Seas, art. 24. "Every State shall draw up regulations to prevent pollution of the seas ... resulting from the exploitation and exploration of the seabed and its subsoil . . . ." Id.
40. One author has mentioned 1937 as the date of the commencement of drilling in open waters in the Gulf of Mexico. I. Alcorn, The Pure Oil Company's Tideland Development 115 (1949). But the National Petroleum Council has stated that "[m]ethods for drilling and producing in offshore waters of the United States have been developed entirely since 1946." Nat'l Petroleum Council, Petroleum Resources Under the Ocean Floor 17 (1969).
42. This was the view, for example, of Lauterpacht. Lauterpacht, Sovereignty Over Submarine Areas, 27 Y.B. Brit. Int'l L. 376, 376-77 (1950). But Kunz thought that at that point customary international law was only in its formative stage. Kunz, Continental Shelf and International Law: Confusion and Abuse, 50 Am. J. Int'l L. 828, 829-30 (1956). There is little doubt that it is now part of customary international law. See North Sea Continental Shelf Cases, [1969] I.C.J. 3, 22.
The legal regime instituted by the Truman Proclamation and the Geneva Convention on the Continental Shelf has provided the needed stability for exploitation of oil from beneath coastal waters, a source from which it is estimated one-third of the future world production will be derived. With growing production, of course, both actual cases of pollution and the threat of future pollution have increased. The likelihood of blowouts in even fairly well regulated production is illustrated by the United States' experience in the Santa Barbara Channel. The coastal state is charged with the duty to promulgate regulations to prevent pollution resulting from these activities, but the convention contains no guidelines or standards. Again, the old standby of reasonableness applies, with all its uncertainty and ineffectiveness.

Neither customary international law nor the Geneva Convention of 1958 on the Continental Shelf set definite limits to the seabed under coastal states' jurisdiction. Article 1 of the Continental Shelf Convention states that

[f]or the purpose of these articles, the term "continental shelf" is used as referring
(a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

This definition lends itself to the interpretation that national jurisdiction can be extended out over the seabed to the point or line at which it would meet the jurisdiction of another coastal state. In shallow seas like the North Sea, for example, this has already happened, but there the depth of the water only rarely exceeds 200 meters. However, insofar

46. Convention on the Continental Shelf, art. 1.
as the larger and deeper ocean bodies are concerned, the prevailing view, at least for the time being, is that the exploitability test does not permit of indefinite extension of jurisdiction by the coastal state. Nevertheless, there is as yet no agreement as to where this jurisdiction should end.\footnote{48}

Control and prevention of pollution arising from seabed exploitation both within and outside national jurisdiction will be a major feature of the future regime of the seabed. Already a fair amount of progress has been made in the United Nations, which has established a special committee for that purpose. Of the proposals submitted to that committee,\footnote{49} the United States' draft of August 3, 1970, is the most comprehensive.\footnote{50} In this draft the United States proposes that national jurisdiction be limited to the areas landward of the 200-meter isobath.\footnote{51} Beyond national jurisdiction there would be a zone of international trusteeship, extending roughly from the 200-meter isobath to the limits of the continental slope.\footnote{52} Within this zone, although it is part of the international seabed area, jurisdiction over exploitation of the natural resources would belong to the coastal states.\footnote{53}


\footnote{50. United States Draft of U.N. Convention on the International Seabed Area, supra note 48.}

\footnote{51. Id., art. 1(2).}

\footnote{52. Id., art. 26(1).}

\footnote{53. Id., art. 27. This article states in part: "[E]ach coastal State, subject to the provisions of this Convention, shall be responsible for:
  a. Issuing, suspending and revoking mineral exploration and exploitation licenses;
  b. Establishing work requirements . . . ;
  c. Ensuring that its licensees comply with this Convention, and, if it deems it necessary, applying standards to its licensees higher than or in addition to those required under this Convention, provided such standards are promptly communicated to the International Seabed Resource Authority;
  d. Supervising its licensees and their activities;
  e. Exercising civil and criminal jurisdiction over its licensees, and persons acting on their behalf, while engaged in exploration or exploitation; . . . .}
The proposed convention generally imposes on the parties the duty to see that "[a]ll activities in the marine environment shall be conducted with reasonable regard for exploration and exploitation of the natural resources of the International Seabed Area." It also requires that such activities be conducted with adequate safeguards for the protection of the marine environment. Furthermore, it makes each contracting party responsible for damages, including damages caused by all activities of its nationals or its licensees, both individuals and corporations, to any other party or its nationals. However, in contrast to the United States' draft convention on dumping, the proposed seabed convention would entrust the power to make rules and regulations for the protection of the marine environment against pollution to an international agency, the International Seabed Resources Authority. Moreover, this agency would have the power to issue emergency orders at the request of any contracting party to prevent serious harm to the marine environment arising out of any exploration or exploitation activity. Finally, the draft convention provides for adjudication of disputes before a special tribunal, including disputes over pollution. The weakness of this draft as far as pollution is concerned is that, perhaps of necessity, it limits the rule-making power of the International Seabed Authority.

h. Determining the allowable catch of living resources of the seabed and prescribing other conservation measures regarding them;

i. Enacting such laws and regulations as are necessary to perform the above functions."

54. Id., art. 7.
55. Id., art. 9.
56. Id., art. 11.
59. Id., art. 40(j).
60. Id., arts. 46 & 50. Article 46(1) states: "The Tribunal shall decide all disputes and advise on all questions relating to the interpretation and application of this Convention which have been submitted to it in accordance with the provisions of this Convention. In its decisions and advisory opinions the Tribunal shall also apply relevant principles of international law."

The Tribunal may impose on the contracting party or the licensee a fine of not more than $1000 for each day of the offense, payable to the Authority, or damages to any other party concerned, or both. Id., art. 52(2). The Tribunal also prescribes the revocation of licenses, Id., art. 52(3). Any contracting party or any affected persons may appeal from the decisions of the organs of the Authority to the Tribunal. Id., art. 54. The draft convention specifies that "[i]n any case in which the Council issues an order in emergency circumstances to prevent serious harm to the marine environment, any directly affected Contracting Party may request immediate review by the Tribunal, which shall promptly either confirm or suspend the application of the emergency order pending the decision of the case." Id., art. 59.
Authority to the international area. Unfortunately, pollution knows no artificial jurisdictional boundaries.

III. Responsibility for Pollution

International law generally imposes on users a duty not to pollute the oceans. Since the oceans are used by private and state entities, both are responsible when they are remiss in fulfilling this duty. The 1969 Brussels Convention on Civil Liability for Oil Pollution from Ships\(^{61}\) is a reaffirmation and elaboration of the general maritime law which imposes liability for damages for oil pollution caused by a ship on the persons responsible for the ship.\(^{62}\) Following the wreck of the Torrey Canyon, for example—and this was well before the convention was concluded—the British and French governments brought claims in courts of the United States against Union Oil Company, a United States' corporation which was the tanker's real owner, though ostensibly a mere time charterer, and against Barracuda Tanker, a Liberian corporation, the registered owner.\(^{63}\) The convention channels the liability into the shipowner,\(^{64}\) establishes limited strict liability (210 million Poincaré francs for one incident),\(^{65}\) and gives jurisdiction over the claims to the courts of the states which sustain damage.\(^{66}\)

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\(^{62}\) See Sweeney, Oil Pollution of the Oceans, 37 Fordham L. Rev. 155 (1968). "Therefore, pollution damage upon navigable waters to vessels, maritime structures and shellfish beds would give rise to the admiralty remedy, whereas shorefront owners would have been remediless in admiralty because of the locality test. One significant consequence of this test encompassing all navigable waters is that American and English admiralty courts are not restrained from proceeding against offending vessels regardless of flag and regardless of the fact that the offending vessel may not have been in territorial waters at the time of the tort. Thus, if the restrictions of the locality test could be removed, the pollution claimant would find an effective remedy against any vessel causing pollution damage under the general maritime law." Id. at 165 (footnote omitted). See also Convention on the High Seas, art. 24: "Every State shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil . . . ." On the way in which responsibility of individuals is generally established in international law see 2 D. O'Connell, International Law 956 (2d ed. 1970). For a principle on collision and salvage on the high seas see Restatement (Second) of Foreign Relations § 35, at 98 (1965), which states: "A state has jurisdiction to prescribe a rule of general maritime law, as understood by the state, to govern the substantive results of civil claims for collision or salvage service on the high seas, when those claims are asserted for adjudication or other determination in its territory against persons or vessels found there."


\(^{64}\) Brussels Convention, art. III.

\(^{65}\) Id., arts. III & IV.

\(^{66}\) Id., art. IX.
Apart from the convention, however, suit for pollution damages can be brought in states other than those whose nationals sustained damage, as in the Torrey Canyon case, where the British and French governments pressed actions in several countries against the owners and charterers.\textsuperscript{67} Since the range of possibilities is so wide (courts of the owners' state, of the flag state, of the state which sustained damage, or of the state in whose port the offending ship may happen to be located), the decisive factor in most cases will be sheer convenience. Again, as in any instance in which injury is caused by a foreign state or foreign enterprise, suit may be brought in municipal courts by the individuals injured, or by the state representing them, or by the state on its own behalf, if its proper interests were injured.\textsuperscript{68} The state may also bring an action on an international level if its nationals have been denied justice in another state,\textsuperscript{69} or if its own interests have been directly injured by another state.\textsuperscript{70} When these interests of the state include protection of the marine environment, and the injury to that environment does not result in direct damage to health and property (as, for example, when there is extensive destruction of marine organisms caused by the dumping of wastes outside established fishing areas and outside navigation routes) the complaining state might be considered as vindicating the rights of the international community, but this is not as yet generally permitted in international law.

In order to take such action the state must find a treaty or rule of customary law giving it the right to act on behalf of the international community. There was agreement on this point between the opinion of the majority and the dissenting opinion of Judge Jessup in the South West Africa Cases.\textsuperscript{71} The court stated:

Next, it may be said that a legal right or interest need not necessarily relate to anything material or "tangible".\textsuperscript{72} For instance, States may be entitled to uphold some general principle even though the particular contravention of it alleged has not affected their own material interests.\textsuperscript{73} The Court simply holds that such rights or interests, in order to exist, must be clearly vested in those who claim them, by some text or instrument, or rule of law.\textsuperscript{74}

Similarly, Judge Jessup said:

I agree that there is no generally established actio popularis in international law. But international law has accepted and established situations in which States are given a

\textsuperscript{68} See generally C. Eagleton, The Responsibility of States in International Law (1928).
\textsuperscript{70} See 2 D. O'Connell, supra note 62, at 952-56.
\textsuperscript{72} Id. at 32.
right of action without any showing of individual prejudice or individual substantive interest as distinguished from the general interest.\textsuperscript{73}

It may be impossible to identify a specific rule that would authorize \textit{actio popularis} in the pollution field, but generally the conditions are ripe for the emergence of the right of individual states to an unpolluted marine environment. This is indicated by unilateral claims to the right to protect that environment and by the inclusion of the marine environment as the protected interest in recent draft conventions.\textsuperscript{74} But the connection between the interests of the international community and the interests of individual states is so close, and the interests are so intertwined where pollution is concerned, that it may be incorrect to talk of injury to the international community alone when substantial damage is done to the marine environment. The pollution is then harmful not only to the international community in the abstract, but also to actual individuals and states. The intervening state protects primarily its own interest in an ocean fit to be used by all—an ocean, therefore, which must be used in a manner and to an extent that does not impair such fitness. Only secondarily does the state protect the interests of the international community.

While a state can bring a civil action against a foreign ship for damages caused by pollution on the high seas, it is doubtful whether it could validly subject such a ship to its penal laws while the ship is located in its ports. Pollution does not as yet rank among those vital interests for the protection of which international law, at its present stage of development, gives states jurisdiction over the conduct of aliens outside its territory.\textsuperscript{75} Accordingly, the 1954 Convention specifically reserves punishment for oil pollution on the high seas to the flag state.\textsuperscript{76} Moreover, polluting ships are immune from seizure and interference on

\textsuperscript{73} Id. at 387-88 (dissenting opinion).
\textsuperscript{74} For recent draft conventions see, e.g., United States: Draft Convention on the Regulation of Ocean Dumping, art. 3(b), reprinted in 10 \textit{Int'l Legal Materials} 1021 (1971); United States Draft of U.N. Convention on International Seabed Area, supra note 48, art. 23, at 1052.
\textsuperscript{75} Restatement (Second) of Foreign Relations § 33 (1965): "A state has jurisdiction to prescribe a rule of law attaching legal consequences to conduct outside its territory that threatens its security as a state or the operation of its governmental functions, provided the conduct is generally recognized as a crime under the law of states that have reasonably developed legal systems." Id. § 33, at 92. The French Revised Code of Criminal Procedure states: "Any foreigner who, outside the territory of France, shall be culpable, either as principal or as an accomplice, of a crime against the security of the state . . . shall be prosecuted and tried according to the provisions of French laws, if he is arrested in France or if the Government obtains his extradition." W. Bishop, \textit{International Law, Cases and Materials} 560 (3d ed. 1971), translating C. \textit{Pro. Pén.} art. 694 (8e ed. \textit{Petits Codes Dalloz} 1966-67).
\textsuperscript{76} 1954 Convention, art. III(a).
the high seas by any state other than the flag state. Neither customary international law nor the 1958 Convention on the High Seas includes pollution among those acts which make boarding a foreign ship on the high seas permissible.77

In addition to whatever responsibility the individual may have, states bear responsibility for pollution, whether caused by their instrumentalities or by private entities under their jurisdiction. However, the scope of the responsibility in these instances differs. When pollution is caused by a state's instrumentalities, the criteria for imputing acts of governmental agencies to the state are applicable. Acts of officials, whether within or without the scope of their competence, are state acts when a state's power is used to perform them.78 Thus the Grotian idea79 that there must be fault on the part of the state as distinguished from its organs has been generally discarded.80 However, the notion that fault on the part of the organs themselves is necessary before responsibility can be imputed to the state is a widely held view.81 Recently, however, it has been shown that there is a trend in the opinions of arbitral tribunals, and especially in the jurisprudence of the World Court, in favor of an objective theory of responsibility which dispenses with the notion of fault.82 If this trend persists it will eventually eliminate any lingering

77. Convention on the High Seas, art. 22.
78. Restatement (Second) of Foreign Relations § 169 (1965) provides: "Conduct of any organ or other agency of a state, or of any official, employee, or other individual agent of the state or of such agency, that causes injury to an alien, is attributable to the state . . . if it is within the actual or apparent authority, or within the scope of the functions, of such agency or individual agent."
79. 2 H. Grotius, The Law of War and Peace ch. XVII, § XX(2), at 437 (F. Kelsey transl. 1964). "The liability of one for the acts of his servants without fault of his own does not belong to the law of nations . . . ."
80. See C. Eagleton, supra note 68, at 209-14.
81. See, e.g., 33 Ann. Inst. dr. i. (I) 471 (1927). "L'Etat n'est responsable que si l'inexécution de l'obligation internationale est la conséquence du dol ou de la négligence de ses organes." Id. (italics omitted). See also H. Lauterpacht, Private Law Sources and Analogies of International Law 141-43 (1927).
82. See 2 P. Guggenheim, Traité de Droit international public 53 (1954). In analyzing the Wimbledon Case ([1923] P.C.I.J., ser. A, No. 1) Guggenheim stated: "Elle [la cour] s'en abstint pourtant et fit dépendre la sanction uniquement de la violation objective de l'art. 380 du traité de paix de Versailles. Par la suite, la Cour s'en tint toujours à cette jurisprudence." Id. (footnotes omitted). See also 1 G. Schwarzenberger, International Law 632 (3d ed. 1957). "Until the Judgment in the Corfu Channel (Merits) case (1949), the practice of the World Court had been unambiguous. It was based on the assumption that any imputable and voluntary breach of an international obligation constituted an international tort. Not in a single judgment or advisory opinion did the Court pay any attention to guilty intent or negligence as a constituent element of international torts." Id. (footnote omitted) (italics omitted). Similarly, Professor Hardy states: "The situation as regards
reliance in pollution cases on proof of fault on the part of state organs, except when the particular applicable norm would proclaim otherwise. Thus, for example, if the 1969 Brussels Liability Convention (which happens to impose strict liability on the owners of merchant vessels—including states—for oil spilled) required fault for this liability, the rules of that convention would be controlling.

When it comes to pollution originating within a state, but caused by persons other than state organs, the Corfu Channel Case—in which the International Court of Justice predicated Albania's responsibility on knowledge of the minefields within her territorial sea and devoted considerable effort to ascertaining the existence of this knowledge—indicates that responsibility based on fault still fully obtains. Since unmistakable 'State acts' is somewhat different from that as regards the acts of private citizens, even grouped into armed bands, and here it seems that in many cases the requirement of 'fault' is of doubtful application, even at international law. Thus it has never been suggested, in the event of a breach of a treaty obligation for example, that a wilful or negligent breach must be shown before an international wrong was committed. Nor similarly is proof of any form of carelessness or malicious behaviour necessary, if it is sought to hold a State responsible for the acts of what are unquestionably State organs. Thus in the case of The Wanderer, where a British sealing ship was seized by an American vessel, it was said by the Arbitral Tribunal:

The bona fides of the United States naval officers is not questioned. It is evident that the provisions of section 10 of the Act of Congress constituted a likely cause of error. But the United States Government is responsible for that section, and liable for the errors of judgment committed by its agents.


83. Brussels Convention, art. III. Although this convention excludes public ships from its scope, it does indicate the trend in the whole field of pollution of the oceans. Id., art. XI(1).

84. This is also the view of Amerasinghe. C. Amerasinghe, State Responsibility for Injuries to Aliens 45 (1967).


86. Id. at 18-23.

87. For a similar evaluation of the Corfu Channel Case see 1 L. Oppenheim, International Law 343 (8th ed. H. Lauterpacht 1955); Hardy, supra note 82, at 753. However, it has also been held that since the Corfu Channel opinion nowhere mentions fault, it can be interpreted as supporting strict responsibility. See E. Jiménez de Aréchaga, Manual of Public International Law 537-38 (M. Sørensen ed. 1968). See also Goldie, International Principles of Responsibility for Pollution, 9 Colum. J. Transnat'l L. 283, 306-07 (1970). Professor Schwarzenberger makes a distinction between the requirements of knowledge and fault: "The actual knowledge postulated by the Court and fault in the meanings of dolus or culpa are not the same thing. If these notions were identical, a reasonable mistake on the part of the Albanian authorities that the third party which had laid the mines had notified, or would notify, international shipping might have absolved Albania... On the pleadings, it was not necessary for the Court to express itself on this contingency. Until, however, the Court has found on the issue of the relevance of bona fide factual mistake, it remains
the Corfu Channel Case did not deal with pollution, it may be considered as not affecting the earlier holding in the Trail Smelter Case (United States v. Canada), which has been widely acknowledged as having established strict liability for pollution. In Trail Smelter the Arbitral Tribunal stated:

[N]o 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 . . . .

The words "permit the use" in this statement may be understood as not requiring actual knowledge on the part of the state. But, on the other hand, they may equally well be understood as predicking state responsibility on such knowledge—and thus as not differing in this respect from the Corfu Channel opinion.

It may well be that we are, as we should be, on the threshold of an emerging objective responsibility of the state for any pollution which emanates from its territory, including that caused by private enterprises. The concurring opinion of Judge Alvarez in the Corfu Channel Case goes further in that direction than the opinion of the court by postulating the territorial sovereign's knowledge of injurious occurrences and shifting the burden of disclaiming such knowledge to the sovereign. Judge Alvarez stated:

As a consequence of the foregoing [sovereignty], every State is considered as having known, or as having a duty to have known, of prejudicial acts committed in parts of its territory where local authorities are installed; that is not a presumption, nor is it a hypothesis, it is the consequence of its sovereignty. If the State alleges that it was unaware of these acts, particularly if they occurred in circumstances in which vigilance was unavailing—e.g., by the action of submarines, etc.—it must prove that this was the case, for otherwise its responsibility is involved.

Nevertheless, this falls short of strict responsibility, since the state can still refute or rebut the imputation of knowledge.

Similar in type and scope is the responsibility of the state for pollution caused by private ships and enterprises under its jurisdiction on the doubtful whether, even in relation to unlawful omissions, the Court has adopted the culpa-doctrine." 1 G. Schwarzenberger, supra note 82, at 633 (italics omitted). However, he himself admits that "the difference between both concepts is highly relative. Actual knowledge which is inferred changes imperceptibly into constructive knowledge, and the borderline between the latter and negligence is even more fluid." Id.

88. 3 U.N.R.I.A.A. 1905 (1938).
89. See, e.g., Goldie, supra note 87, at 306-07; Hardy, supra note 82, at 751-52.
90. 3 U.N.R.I.A.A. at 1965.
91. Goldie, supra note 87, at 306-17, has assembled examples of strict or absolute liability for pollution emanating from land, for pollution caused by nuclear ships, and for oil pollution.
high seas. If the state fails in its duty, imposed by customary international law, to prevent unreasonable pollution, it becomes responsible for the damage. This responsibility has been affirmed by the 1958 Geneva Convention on the High Seas, which recognizes that there must be a degree of control by a state over ships flying its flag and charges states with drawing up regulations for the prevention of the main types of ocean pollution. It may be that this responsibility, based on fault, is being replaced by an emerging broader principle that states should be generally responsible for any activities of entities under their jurisdiction in areas outside the territorial jurisdiction of any state. Under this rule, the activities of entities other than state organs would be strictly imputed to the state as soon as they were found to transgress a pertinent rule of law, but the finding of transgression may or may not depend on fault. A state would simply become responsible for private enterprises in the same way as it is already responsible for the activities of its organs. Thus the 1967 Space Treaty states in article 6: "Parties to the Treaty shall bear international responsibility for national activities in outer space ..." Similarly, the United States draft of the United Nations Convention on International Sea Bed Area states:

Each Contracting Party shall be responsible for damages caused by activities which it authorizes or sponsors to any other Contracting Party or its nationals.

The evidence is still scanty and barely enough to indicate a trend, but the need for such a rule is obvious, and whenever circumstances are ripe it is only a question of time before the appropriate rule emerges.

93. Convention on the High Seas, art. 5.
94. Id., arts. 24 & 25.
95. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, done Jan. 27, 1967, art. 6, [1967] 3 U.S.T. 2410, T.I.A.S. No. 6347. Goldie thinks that the space treaty establishes responsibility based on fault: "In contrast to the level of responsibility called for in the nuclear energy treaties [sic], the 1963 Draft Declaration and the Outer Space Treaty impose a concept similar to fault liability, permitting an operator who deliberately creates a risk to pass at least some of the cost of that risk onto others, thereby to expropriate from them." Goldie, supra note 87, at 312. But it seems that articles 6 and 7 of the treaty establish state responsibility only for operator activities; they do not determine whether fault of the operator is necessary to create this responsibility. This is to be done by another convention, which has just been concluded and contains a mishmash of strict and fault liability. See U.N. Draft Convention on Liability for Damage Caused by Objects Launched into Outer Space, arts. 2, 3, 4(1)(a) & (b), reprinted in 10 Int'l Legal Materials 965 (1971).
IV. Scope of Jurisdiction of Coastal States

A. Jurisdiction Within Twelve Miles of the Coast

By general principles of law, by customary international law, and by conventions, states are accorded more powers to control pollution in stretches of water adjacent to their shores than in any other part of the sea. This, of course, reflects the recognition by international law of the special interests of coastal states. The fullest power or jurisdiction of the coastal state is in the territorial sea and is generally limited only by the right of innocent passage of foreign vessels. The limitations imposed by this right do not, however, preclude states from enacting and enforcing anti-pollution laws and regulations applicable to foreign ships within the territorial sea.

The 1958 Geneva Convention, which generally embodies customary international law, states in article 17:

Foreign ships exercising the right of innocent passage shall comply with the laws and regulations enacted by the coastal State in conformity with these articles and other rules of international law and, in particular, with such laws and regulations relating to transport and navigation.

The expressions "transport" and "navigation" are broad enough to include rules concerning pollution. However, if there were any doubt as to whether article 17 provided an adequate basis for the state's anti-pollution regulations, the right to enact these regulations is implied in article 16, which says: "The coastal State may take the necessary steps in its territorial sea to prevent passage which is not innocent."

97. There was some controversy on this point, in which the theory was advanced that the territorial sea is no more than a kind of contiguous zone where states have specific separate rights or servitudes. See generally P. Jessup, The Law of Territorial Waters and Maritime Jurisdiction 115-19 (1927). More recently it has become generally accepted that states have sovereignty or full jurisdiction over the territorial sea. See J. Andrassy, International Law and the Resources of the Sea 45-46 (1970). The dominant theory has been enshrined in article 1 of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone, which states: "1. The sovereignty of a State extends, beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea. 2. This sovereignty is exercised subject to the provisions of these articles and to other rules of international law." Convention On the Territorial Sea and the Contiguous Zone, done April 29, 1958, art. 1, [1964] 2 U.S.T. 1606, T.I.A.S. No. 5639, 516 U.N.T.S. 205 [hereinafter cited as 1958 Territorial Sea Convention].

98. This right is so well established in international law that, according to Professor Jessup, it does not even require citation of authority to prove it. P. Jessup, supra note 97, at 120. It was recognized even for warships in the holding in the Corfu Channel Case, [1949] I.C.J. 4, and finally was embodied and given precision in the 1958 Convention on the Territorial Sea and the Contiguous Zone. 1958 Territorial Sea Convention, art. 14(1).

99. 1958 Territorial Sea Convention, art. 17.

100. Id., art. 16(1).
The expression "take ... steps" seems, again, broad enough to include anti-pollution rules. The only condition would be that these rules must apply to the prevention of non-innocent passage, which was defined in article 14 as passage prejudicial "to the peace, good order or security of the coastal State."\(^{101}\)

In view of the size of modern ships, especially tankers, non-compliance with such measures for the prevention and mitigation of pollution as, \textit{inter alia}, observance of special routes, special safety devices, or pilotage conditions, would be considered as posing a threat to the coastal state and thus would make passage not innocent. Prior to the 1958 Conference on the Law of the Sea, the International Law Commission had in fact stated, in its sixth session draft on the Regime of the Territorial Sea, that

[p]assage is not innocent if a vessel makes use of the territorial sea of a coastal State for the purpose of committing any act prejudicial to the security or public policy of that State or to such other of its interests as the territorial sea is intended to protect.\(^{102}\)

In the comment to this article the Commission had expressly identified "such other interests" as including the ones enumerated in article 21 of its draft.\(^{103}\) Second among these latter interests was "protection of the waters of the coastal State against pollution of any kind caused by vessels ... ."\(^{104}\) Nevertheless, in its final draft, which became the basis of the 1958 Convention on the Territorial Sea and the Contiguous Zone, the Commission abandoned specific enumeration because of the lengthening roster of interests to be protected.\(^{105}\)

Ships that do not comply with the coastal state's anti-pollution provisions can be denied access to its territorial waters or ports.\(^{106}\) This right, which is implied in the 1958 Convention on the Territorial Sea and the Contiguous Zone—that the coastal state may take the necessary

\(^{101}\) Id., art. 14(4).


\(^{103}\) Id.

\(^{104}\) Id., art. 21(b), at 159.

\(^{105}\) See Report on the Law of the Sea, supra note 6, art. 18, at 258. In this report the commission relegated the enumeration of specific interests to a comment. Id. at 274.

\(^{106}\) There is still some controversy as to whether a state can at will prevent access to its ports for particular foreign ships. The better view and practice seems to be that it can. See McDougal & Burke 107. Even the proponents of the freedom of ports admit, as a rule, the right to exclude for security reasons. See 1 P. Fauchille, Traité de Droit International Public (II) 1021 (8th ed. 1925); 1 C. Hyde, International Law 582 (2d rev. ed. 1947). See generally L. Hydeman & W. Berman, International Control of Nuclear Maritime Activities 131-42 (1960) [hereinafter cited as Hydeman & Berman].
steps to prevent non-innocent passage— is fully supported by the Declaration on Maritime Pollution adopted after extensive debate by the Institute of International Law at its Edinburgh session in 1969. Article 6 of its Resolution III (Measures Concerning Accidental Pollutions of the Seas) states:

States have the right to prohibit any ship that does not conform to the standards set up in accordance with the preceding articles for the design and equipment of the ships, for the navigation instruments, and for the qualifications of the officers and members of the crews, from crossing their territorial seas and contiguous zones and from reaching their ports.

The coastal state can also proceed both civilly and criminally against the offending ship. The 1958 Convention on the Territorial Sea and the Contiguous Zone permits a state to levy execution against or seize a ship for the purpose of any civil proceedings in respect to obligations or liabilities incurred in the course of or for the purposes of the voyage. This obviously includes liability for pollution committed in passage through territorial waters. The convention also permits the coastal state to arrest any person or to conduct an investigation in connection with any crime committed on board a ship during such passage if the consequences of the crime extend to the coastal state.110 This, again, would appear to include pollution.

The question of the breadth of the territorial sea is still unsettled, but it may be safely stated that since the Geneva Conventions on the Law of the Sea, international law on this subject has evolved to allow any state to extend its territorial sea twelve miles seaward, thus vindicating the International Law Commission’s hesitant acknowledgement of this trend in its final report of 1956.111 A number of states already claimed twelve miles at the time of the first Geneva Convention.112 Since then many more have made such claims,113 one of the most recent being Canada, which abandoned the losing side in June, 1970.114 Objections, whenever made, have amounted to no more than ineffective

107. 1958 Territorial Sea Convention, art. 16.
109. 1958 Territorial Sea Convention, art. 20(2).
110. Id., art. 19(1)(a).
112. See 4 M. Whiteman, supra note 11, at 17, table at 21-23.
113. Id. at 34-35. See also Oda, International Law of the Resources of the Sea, 127 Recueil des Cours 355, 382 (1969 II).
"paper protests." Even the United States, without officially abandoning the three-mile zone, has recently expressed readiness to acknowledge the legitimacy of the twelve-mile territorial sea. In view of this, the rights of the coastal state in the so-called contiguous zone established by the 1958 Geneva Convention seem to be of a transitory character, since this zone cannot be extended farther than twelve miles from the shore and it can seemingly be incorporated into the territorial sea at any time.

However, even without extending the territorial sea, the provisions of the 1958 Convention on the Territorial Sea and the Contiguous Zone impliedly give the coastal state jurisdiction over pollution up to twelve miles. Although article 24 of the convention does not mention pollution, it allows the coastal state to exercise jurisdiction in sanitary matters. This jurisdiction is generally considered broad enough to include pollution. The coastal state is specifically empowered to exercise the control necessary 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." Prevention is understood generally as encompassing the adoption of regulations and the exercise of surveillance and exclusion, but not arrest or punishment. The latter are reserved as actions to be utilized subsequent to a violation within a state's territory or territorial sea. This means, of course, that the coastal state can arrest and punish outgoing ships but not incoming or passing ships. Similarly, the Institute of International Law's Edin-

115. See 4 M. Whiteman, supra note 11, at 118-19.
117. 1958 Territorial Sea Convention, art. 24.
118. This is evidenced by the comment of the Int'l Law Comm'n to its final draft, which was the basis for the convention. Report on the Law of the Sea 294-95; see Hydeman & Berman 240-47.
119. 1958 Territorial Sea Convention, art. 24.

"(1) A state has jurisdiction to prescribe and to enforce, with respect to conduct occurring in a zone of the high seas contiguous to its territorial sea, rules of law necessary to

(a) prevent the infringement of its customs, fiscal, immigration, or sanitary regulations within its territory, including its territorial sea;
burgh declaration of 1969, which is the most recent authoritative pronouncement on states' duties and rights concerning pollution of the sea, implicitly permits the coastal state to lay down rules and regulations for ships passing through the contiguous zone and to enforce them through exclusion and denial of access.\textsuperscript{121}

**B. Jurisdiction Beyond Twelve Miles From Shore**

Despite the actual or potential absorption of the contiguous zone into the territorial sea and the probability that the zone will soon be eliminated altogether, parties to the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone are prevented from claiming larger areas of protection, at least for the interests embraced by the contiguous zone, among which is pollution.\textsuperscript{122} The twelve-mile limit would also apply to non-parties if a zone of that breadth for the protection of these interests had become a rule of customary international law before 1958, or if it had since ripened into such a rule. This, however, was not the case.\textsuperscript{123} Non-parties can thus claim protection zones for these interests beyond twelve miles if they can find a basis for such claims in general principles of law or customary international law. It has been convincingly argued that protection of some of these interests, such as customs and immigration, at a reasonable distance from the shore could have ripened into customary law before 1958\textsuperscript{124} through repeated practice and lack of

\begin{itemize}
\item (b) punish the infringement of such regulations committed within its territory, including its territorial sea.
\end{itemize}

For a criticism of this view see Oda, The Concept of the Contiguous Zone, 11 Int'l & Comp, L.Q. 131, 153 (1962).

\textsuperscript{121} See Measures Concerning Accidental Pollutions of the Seas, arts. 1, 2, 4, & 6, reprinted in 53 Ann. Inst. dr. i. (II) 380, 380-81 (1969).
\textsuperscript{122} Cf. Hydeman & Berman 244-45.
\textsuperscript{123} There is little evidence that states have observed the twelve-mile limitation in claiming jurisdiction beyond the territorial sea. The English did not so limit themselves, exercising such jurisdiction in customs matters out to 100 leagues (300 miles) throughout the nineteenth century. See Hydeman & Berman 188-90; McDougal & Burke 585. The United States has exercised a similar jurisdiction. For example, the Anti-Smuggling Act of 1935 (19 U.S.C. § 1701(a) (1970)) permits arrest of foreign hovering ships at distances of up to 100 miles from shore. On the American practice in general, see Church v. Hubbart, 6 U.S. (2 Cranch) 187 (1804) (Marshall, C.J.). Both Hydeman & Berman and McDougal & Burke conclude generally that article 24 of the convention cannot be considered a codification of existing law. Hydeman & Berman 243-44; McDougal & Burke 606-07.
\textsuperscript{124} E.g., Hydeman & Berman 195-97; McDougal & Burke 602.
protest. It is doubtful, however, whether protection against pollution did so, simply because the practice did not have sufficient chance to develop either specifically for pollution prevention or generally for sanitary purposes. But, unless the problem is satisfactorily solved by general convention, the growing interest in pollution protection undoubtedly will lead to the emergence of customary international law in this area.

Canada has already taken the lead in the making of this law. Spurred by the discovery of oil deposits in the Arctic and by the opening up of the Northwest Passage, it enacted in 1969 a statute which gives it power to control pollution in Arctic waters roughly out to 100 miles north of its coast, and to lay and enforce regulations for foreign ships. The Canadians have not claimed sovereignty over this area, but only the right to prevent pollution.

Although the lack of general acquiescence in the claims made by coastal states of a right to regulate foreign shipping in the interests of pollution prevention in coastal waters deprives these claims of the status of existing customary law, it does not deprive them of the status of an emerging rule of law. Since there is a genuine need to minimize and prevent pollution and since the special interests of the coastal state in the waters off its shores but beyond its territorial sea are generally recognized, the right of coastal states to maintain preventive regulation of pollution in these waters is at a stage when exaggerated claims and

125. After reviewing the conclusions of writers on this subject, Hydeman & Berman acknowledged the impossibility of concluding that "the limited practice of extending sanitary control beyond the limits of territorial seas is sufficient, in and of itself, to provide the basis for a rule of customary international law. Rather, such a conclusion must be based on the acceptance of a customary rule of law in customs control and the close analogy between customs and sanitary control. Because of limited practice, the International Law Commission took a more conservative view of contiguous zones for sanitary purposes than it did for customs zones. The Commission concluded that contiguous zones for sanitary control should be recognized, but it did not suggest the existence of a rule of customary international law." Hydeman & Berman 200 (footnote omitted). For the International Law Commission's views see Report on the Law of the Sea 294-95.


counterclaims are made preliminary to the emergence of a general rule.130

The Canadian claim would rest on more solid ground if it could be shown that international law permits coastal states to exercise jurisdiction over foreign shipping for any reasonable purpose at any reasonable distance from the shore. Then it would not be necessary to show that the assertion of a particular type of jurisdiction over the high seas had become a rule of customary international law, but merely that such assertion was reasonable in particular circumstances. This view, which has had advocates in the past, has most recently been espoused by Hydeman and Berman:

A rule of international law seems to have emerged which permits a coastal State to make reasonable assertions of jurisdiction and control in areas of the high seas contiguous to its territorial sea in order to protect vital interests in its territory or territorial waters.131

Among court opinions it finds support in the celebrated opinion in Church v. Hubbart in which Mr. Chief Justice Marshall said:

The seizure of a vessel, within the range of its cannon, by a foreign force, is an invasion of that territory, and is a hostile act which it is its duty to repel. But its [the state's] power to secure itself from injury may certainly be exercised beyond the limits of its territory. Upon this principle, the right of a belligerent to search a neutral vessel on the high seas, for contraband of war, is universally admitted . . . . [S]o too, a nation has a right to prohibit any commerce with its colonies. Any attempt to violate the laws made to protect this right, is an injury to itself, which it may prevent, and it has a right to use the means necessary for its prevention.132

Though the language is broad enough to be interpreted as admitting a right of protection from any injury, it may also be understood that Mr. Chief Justice Marshall was simply talking about the right to protect commerce, which was already established and admitted.133 Under this

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130. See McDougal, The Hydrogen Bomb Tests and the International Law of the Sea, 49 Am. J. Int'l L. 356 (1955). "From the perspective of realistic description, the international law of the sea is not a mere static . . . process . . . . It is . . . a process of continuous interaction, of continuous demand and response, in which decision-makers of particular nation states unilaterally put forward claims of the most diverse and conflicting character to the use of the world's seas, and in which other decision-makers, external to the demanding state and including both national and international officials, weigh and appraise these competing claims in terms of the interests of the world community and of the rival claimants, and ultimately accept or reject them." Id. at 356-57.

131. Hydeman & Berman 236.


133. In the same opinion Mr. Chief Justice Marshall also said: "These means do not appear to be limited within any certain marked boundaries, which remain the same, at all times and in all situations. If they are such as unnecessarily to vex and harass foreign lawful commerce, foreign nations will resist their exercise. If they are such as are reasonable and necessary to secure their laws from violation, they will be submitted to." Id. at 235.
latter interpretation, instead of supporting a blanket right of the coastal state to exercise jurisdiction over foreign shipping on the high seas whenever interests located on its territory or in its territorial sea were reasonably in need of defense, Marshall's opinion may merely admit the existing right in international law to protect a particular type of interest, namely commerce. This more restrictive view of the coastal state's jurisdiction is reflected in the United Nations Secretariat's report to the International Law Commission, attributed to that celebrated French authority on the law of the sea, Gidel,\(^\text{134}\) and is, of course, embodied in the Commission's draft and in article 24 of the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone.\(^\text{135}\) It seems that the less restrictive view of freedom of the seas is the more reasonable one and, as such, more likely to represent that degree of compromise which is necessary to create international law.

Admitting the right of the coastal state to protect any reasonable interest at any reasonable distance from the shore would also substantiate a great deal of the more extensive claims of the Latin American states. The Lima Declaration of August 1970\(^\text{136}\) declares that the limits of coastal state jurisdiction are to be determined by reasonableness and geographical, geological, biological and economic criteria.\(^\text{137}\) Whether under the Latin American states' claim to actual jurisdiction over large expanses of water (anathema to the freedom of the seas) or the theory of blanket jurisdiction which empowers the coastal states, within a contiguous zone of unlimited extent for the protection of reasonable interests, to control only activities which leave the status of the waters unchanged

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137. Paragraph 2 of the Declaration reads: "The right of the coastal State to establish the limits of its maritime sovereignty or jurisdiction in accordance with reasonable criteria, having regard to its geographical, geological and biological characteristics, and the need to make rational use of its resources ... ." 10 Int'l Legal Materials 207, 208 (1971).
(i.e., still high seas), the net result—barring differences of nomenclature—is to vest in coastal states absolute control of ships over vast areas of ocean. To that extent the two claims coincide and overlap.

But perhaps the Latin American claims, like Marshall's opinion in *Church v. Hubbart*, can also be resolved into claims to protect particular interests whose protection has already become or is about to become a rule of international law. Thus, although the Lima Declaration still lays claim to full jurisdiction, it does not set numerical limits and it does single out the protection of some individual interests.\(^{138}\)

The possibility that the Latin American general assertion of jurisdiction over adjacent waters may be parcelled up into separate assertions for the protection of particular interests, such as fisheries or freedom from pollution, has begun to be recognized by the United States in the Comment to the United States Draft Articles on the Territorial Sea, Straits, and Fisheries, submitted to the United Nations Sea Bed Committee, which states:

The first article presented by my Government would establish a maximum breadth of 12 miles for the territorial sea. ... In most cases where broader jurisdictional claims have been made, the reasons for those claims were resource-oriented. We believe that the real concerns of those few states that have claimed broader limits for the territorial sea can be accommodated in the course of the work of this and the other subcommittees.\(^{139}\)

If this view of the character of the Latin American claims is correct, then they are moves—like those of Canada—in the emergence of customary international law concerning the protection of particular interests of the coastal state, including a pollution-free marine environment.

While the right to control foreign shipping for protection against potential pollution remains in the twilight zone of emerging law, the coastal state has always had the right to take all necessary measures to protect itself when existing pollution has already spread toward its shores or when there is an imminent danger of such pollution. When the question resolves itself into taking measures against the actual pollutant matter, i.e., after a ship has sunk and left a spreading oil film, then the threatened coastal state—or for that matter, any other state—may undertake mopping up or containing operations on the high seas. There

\(^{138}\) Paragraph 4 of the Declaration specifically added pollution prevention as a right of the coastal state. "The right of the coastal State to prevent contamination of the waters and other dangerous and harmful effects that may result from the use, exploration or exploitation of the area adjacent to its coasts ...." Id.

are no rules of international law that protect pollutant matter already in the waters of the high seas.\footnote{140}

If the pollution is caused by a ship or by a fixed or floating installation under foreign jurisdiction (this latter eventuality may and probably will come about in the not-too-distant future), and preventive measures, to be effective, must be taken against that ship or installation (as in the \textit{Torrey Canyon} situation), then the rights of the coastal state depend upon the imminence and dimensions of the threat. These two elements are of crucial importance because the right to take protective measures is based on the principle of self-protection or self-defense. Professor Lauterpacht characterizes protective measures against even natural disasters as self-defense,\footnote{141} while Professor Waldock seems to equate the two terms.\footnote{142} However, "self-defense" usually is applied to instances of repelling the use of force by human agents. It is, therefore, more appropriate to use the term self-protection.\footnote{143}

As the basis of the right to avert pollution, self-protection was explicitly adopted by Juraj Andrassy in his definitive report on maritime pollution to the 12th Commission of the Institute of International Law.\footnote{144}

\footnote{140} See the observations of Vladimir Koretsky on the "marée noire" in 53 Ann. Inst. dr. i. (I) 682 (1969).

\footnote{141} 1 L. Oppenheim, supra note 87, at 298-99 n.3.

\footnote{142} Waldock, The Regulation of the Use of Force by Individual States in International Law, 81 Recueil des Cours 455, 465-66 (1952 II). "Further, the International Court is said to have 'firmly rejected the argument of self-protection or self-help' in the Corfu Channel Case. But the Court in that case . . . carefully distinguished between forcible self-help which it disapproved and forcible self-protection which it expressly approved. Nor does there seem to be any reason in principle why the 'inherent right of self-defense' possessed by a State under general international law should not be exercisable on the high seas when otherwise a legitimate need for its exercise exists." Id. (italics omitted) (footnote omitted).

\footnote{143} See, e.g., the observation of Charles De Visscher in connection with the discussion of the prevention of maritime pollution by the Institute of International Law at its 1969 session. "De même, il faut éviter de parler de 'légitime défense', non seulement parce que cette notion a donné lieu à trop de discussions (cf. celles suscitées par l'art. 51 de la Charte), mais surtout parce qu'elle est trop étroitement liée à l'idée d'une agression, laquelle n'a rien à voir ici.

"La notion l'accident et celle d'une fonction d'intérêt général s'accordent, au contraire, avec la notion de l'autoprotection. Celle-ci est l'idée de base vraiment inhérente à l'existence de l'Etat. Le droit dit de nécessité et celui de légitime défense n'en sont que des formes particulières, dérivées et discutées." 53 Ann. Inst. dr. i. (I) 649, 652 (1969) (italics omitted). See also id. at 626 (observations of Edward McWhinney); id. at 633 (observations of Fritz Münch).

\footnote{144} 53 Ann. Inst. dr. i. (I) 653 (1969). According to Juraj Andrassy, "Les membres de la Commission ayant adopté le point de vue que le fondement du droit d'intervention de l'Etat riverain en cas d'accident survenu se trouve dans la droit d'autoprotection . . . ." Id. at 660.
In view of the narrow definition of self-defense in modern international law and the vagueness of the principle of self-protection, it may already be superfluous to seek in them the bases for measures against existing pollution. It may suffice to acknowledge that a state's interest in keeping its coastline and jurisdictional waters free from pollution from the sea entitles it to take the necessary measures to defend itself when pollution actually threatens.

Evidence that the undertaking of defensive measures against pollution actually coming from the high seas has ripened into a separate right can be seen in the lack of protest when the British destroyed the Torrey Canyon. It has also been recognized generally for all pollutants in the declaration of the Institute of International Law adopted at its Edinburgh Session in 1969:

Any State facing grave and imminent danger to its coastline or related interests from pollution or threat of pollution of the sea, following upon an accident on the high seas, or acts related to such an accident, which may be expected to result in major consequences, may take such measures as may be necessary to prevent, mitigate or eliminate such danger . . . .

The same principle is recognized for pollution by oil in the 1969 Brussels Liability Convention, which states:

Parties to the present Convention may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences.

While the 1969 draft convention codifies rules of protection against imminent pollution following an accident, two other conventions, within narrow limits and incidental to the regulation of their own subject matter, permit measures to control future or potential pollution beyond the twelve-mile limit. According to the 1958 Geneva Convention on the Continental Shelf, the coastal state has the duty to enact and enforce anti-pollution regulations for the protection of living resources within the safety zones that it is allowed to maintain around installations for the exploitation of the natural resources of its continental shelf. While

147. Convention on the Continental Shelf, art. 5(2), supra note 43, states: "Subject to the provisions of paragraphs 1 and 6 of this article, the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and exploitation of its natural resources, and to establish safety zones around
the explicit duty to enact such regulations is confined to safety zones, the implied right and duty to enact anti-pollution rules for the entire area of the continental shelf under national jurisdiction stems from the right of the coastal state to exploit the continental shelf. Since only the coastal state can exploit its continental shelf resources, it follows that it can protect operations undertaken for that purpose and that it has the duty and the responsibility to prevent adverse effects on the interests of other states arising from these operations. Article 5(1) of the convention, which states:

The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.\(^{148}\)

may be interpreted as giving the coastal state authority and imposing on it the duty to control pollution from operations for the exploitation of the continental shelf\(^{149}\) and, at the same time, as setting limits on the right to enact anti-pollution rules for the protection of these operations. The coastal state may properly exclude foreign ships from sailing through the threatened area, since this would not be "unjustified interference with navigation." However, the convention does not give the right to arrest and punish an offending foreign ship, except perhaps for violations of regulations in safety zones, in which the coastal state may take "all appropriate measures."

To the extent that the right to enact anti-pollution measures is implied in the sovereign rights of the coastal state to explore the continental shelf which are embodied in articles 1 to 3 of the convention, it has become part of customary international law. According to the Court of International Justice in the North Sea Continental Shelf Cases,\(^{150}\) these three articles have at least acquired such status.\(^{151}\) It may be that coastal states

\(^{148}\) Id., art. 5(1) (emphasis added).

\(^{149}\) This duty is explicitly imposed by article 25 of the 1958 Geneva Convention on the High Seas. See Convention on the High Seas, art. 25.


\(^{151}\) Id. at 39. The court stated: "This expectation is, in principle, fulfilled by Article 12 of the Geneva Continental Shelf Convention, which permits reservations to be made to all the articles of the Convention 'other than to Articles 1 to 3 inclusive'—these three Articles being the ones which, it is clear, were then regarded as reflecting, or as crystallizing, received or at least emergent rules of customary international law relative to the continental shelf, amongst them the question of the seaward extent of the shelf; the juridical
possess this right independently not only of the convention, but perhaps even of any customary rules (except to the extent that customary international law is the basis of a state's jurisdiction over its territory), because the continental shelf is the prolongation of a state's territory and, as such, under state territorial jurisdiction.¹⁵²

In the 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, the coastal state was given a limited right to enact anti-pollution measures for the protection of all living resources adjacent to its shores.¹⁶³ It may impose conservation measures, which imply protection against pollution, when negotiations with the states concerned have not led to an agreement within six months and the need is urgent and has been scientifically established.¹⁶⁴ These measures are valid only pending final settlement by a special commission.¹⁶⁵ Furthermore, even within this limited scope, anti-pollution regulations would apply solely to nations that fish in particular areas, and probably then only to their fishing boats and fishing methods, since the convention speaks generally about conservation measures by and for nations engaged in fishing in the place where conservation is needed.¹⁶⁶ As in the Continental Shelf convention, violation of anti-pollution regulations and, for that matter, any conservation measure under this convention, would not entitle the coastal state to any stronger action than exclusion of the offending vessel from its fishing grounds, except on the strength of a specific agreement. In order to override the protection afforded ships

character of the coastal State's entitlement; the nature of the rights exercisable; the kind of natural resources to which these relate; and the preservation intact of the legal status as high seas of the waters over the shelf, and the legal status of the superjacent air-space.”

¹⁵² Id. at 22. The court stated: “More important is the fact that the doctrine of the just and equitable share appears to be wholly at variance with what the Court entertains no doubt is the most fundamental of all the rules of law relating to the continental shelf, enshrined in Article 2 of the 1958 Geneva Convention, though quite independent of it,—namely that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist ipso facto and ab initio, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources. In short, there is here an inherent right. In order to exercise it, no special legal process has to be gone through, nor have any special legal acts to be performed. Its existence can be declared . . . but does not need to be constituted. Furthermore, the right does not depend on its being exercised.” Id. (italics omitted).


¹⁵⁴ Id., art. 7.

¹⁵⁵ Id.

¹⁵⁶ Id., arts. 4-7.
by the principle of the freedom of the seas, there must be an explicit and specific conventional or customary rule.

V. Conclusion

Because marine pollution has only recently been recognized for what it is—a problem of global dimensions and extreme complexity—international law has not yet evolved specific rules for dealing with it. This does not mean that international law ignores marine pollution; it means only that the prohibition of pollution must be sought in the general rules pertaining to the use of the sea. These rules are necessarily vague and can be made workable only by interpreting them as almost totally permitting or totally forbidding pollution. However, once it is accepted that the duty not to pollute the high seas exists in international law, transgression of this duty must invoke the responsibility of states and private enterprise.

Even so, it is one thing to assign this broad responsibility and quite another to proceed effectively against the polluters in particular instances. Lack of appropriate substantive municipal law, coupled with constitutional bars to the direct application of international law, may preclude suits in municipal courts. An international forum may also be denied to the plaintiff state for lack of standing on the ground that the injury was not to its individual interests but to those of the international community—a separate, abstract entity—or to mankind as a whole.

Nevertheless, explicit recognition of the need to protect the marine environment in recent projects of international conventions indicates

157. In addition, procedural obstacles may preclude bringing a suit in the courts of the polluter's state. See, e.g., Read, The Trail Smelter Dispute, 1 Can. Y.B. Intl L. 213, 222 (1963), wherein the author said: "The ordinary course followed by persons damaged by fumes from a smelter was to bring a suit in the courts of justice for damages and for an injunction to prevent future damage. This, however, was not satisfactory for the claimant in the State of Washington. It was the general opinion of the lawyers concerned at the time that the British Columbian courts would be compelled to refuse to accept jurisdiction in suits based on damage to land situated outside of the province. Apart, therefore, from the practical difficulty confronting some hundreds of claimants in bringing suits in a foreign forum, there was the moral certainty that they would lose."


that the interest of individual states in the marine environment will be protected by law. While progress is being made along these lines, uncertainties remain, even when there is demonstrable injury to a state's material interests, as to the degree of responsibility with which the offender shall be burdened. The trend seems to be toward strict liability, whether on the part of the state or of private enterprise and whether the pollution derives from within the state's boundaries or originates on the high seas.100

Because of the vagueness and uncertainty of the rules of international law concerning pollution of the high seas, some states have begun to claim jurisdiction to control pollution outside the twelve-mile limit101 established by the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone.102 Special-purpose jurisdiction of coastal states for an indeterminate distance from the shore has numerous precedents103 and, although it might be an exaggeration to declare that such jurisdiction for pollution control has become a rule of customary law, the conflicting claims and counterclaims look very much like the birthpangs of a customary rule.104

Conventional law has managed to develop fairly precise rules for civil liability in the case of oil spills from ships, but it has been much less effective with other types of pollution and generally has dealt with the problem in piecemeal fashion. When a particular kind of pollution becomes sufficiently noticeable and acquires sufficient nuisance value, a convention is concluded. Thus, in step with the post-World War II development of large tankers, the 1954 Convention on Oil Pollution was concluded105 and then supplemented by two further conventions in 1969.106 When nuclear vessels began to ply the seas, a convention followed in 1962.107 Provisions dealing with pollution from seabed exploitation were

160. See notes 91, 95 & 96 supra and accompanying text.
162. 1958 Territorial Sea Convention, art. 24.
163. See generally Opinion of Dr. Hessel E. Yntema, Professor of Law, University of Michigan, on the Validity of Hovering Legislation in International Law, Submitted by the Treasury Department in Support of H.R. 5496, Hearings on H.R. 5496 Before the House Comm. on Ways and Means, 74th Cong., 1st Sess., 82 (1935), which reviews the past and present legislative attempts to deal with the problems of "hovering vessels."
164. See note 131 supra and accompanying text.
165. 1954 Convention, supra note 13.
167. Convention on the Liability of Operators of Nuclear Ships, reprinted in 57 Am. J. Int'l L. 268 (1963). However, as far as this writer is aware, the convention is still not
included in the United States draft convention of 1971 which dealt with the seabed regime in general, and now that dumping has begun to attract attention, the United States has proposed a separate convention on dumping and the resultant pollution, to be considered by the projected 1973 Conference on the Law of the Sea. While the draft seabed convention seems to be well worked out, the proposals for control of dumping are totally inadequate and do not do justice to this important source of pollution. It can only be hoped that the 1973 Conference will build more adequate rules on these proposals.

Although there are many sources of marine pollution, the problem itself is a unitary one and, in its fundamental aspects at least, should be dealt with as such. Thus, while particular conventions may be retained for particular types of pollution, general provisions—whether in a separate pollution convention or in a general convention on the regime of the seas—should establish as a minimum the clear duty of states and individuals not to pollute and should provide for the promulgation of seawater quality standards. Since it envisages an international authority and entrusts that authority, inter alia, with the promulgation of anti-pollution regulations, the United States' proposal for a seabed convention might serve as a framework for the machinery necessary to create these standards. However, the jurisdiction of this seabed agency is limited to the projected international area of the seabed, and pollution does not recognize such jurisdictional niceties. To be effective, standards must be uniformly established for all ocean waters.

Though the mere creation of such an authority would of itself be a great achievement, the gap between power to create standards and their actual creation is very wide and there are immense obstacles of a scientific and technical nature to be overcome. The problem of implementing standards is perhaps equally complex, but once in existence they would immediately provide criteria for national and international adjudication. Perhaps the most effective way to enforce them would be to give states and the international authority power to bring states responsible for pollution before an international special tribunal. The tribunal and the

171. Id.
authority envisaged in the United States' seabed proposal are to have some of this power, so the pioneering work has already been done.\textsuperscript{172} It is probably too early to expect that the international tribunal, if and when it is established, would be given jurisdiction to hear the pollution complaints of individuals, but it should at least be able to hear complaints brought by states on behalf of individuals without the requirement of exhaustion of local remedies. Since it is very likely that only states would be sued before the special international tribunal, they should unequivocally be made responsible, despite a lack of fault on their part, for pollution caused by ships flying their flags as well as by individuals and enterprises under their jurisdiction.\textsuperscript{173}

While the working out of acceptable standards is crucial for pollution control, it is only realistic to recognize that even if standards are accepted in principle, it will take a long time before they are established. In the interim, the international tribunal must decide in each particular case whether actual pollution or the threat of pollution has occurred. To facilitate the tribunal's task, and also to permit greater uniformity within the decision-making process, general categories of factors to be taken into account should be indicated—e.g., the geography and hydrography of the area in question; climatological conditions; quality of the receiving waters; actual or potential effect of pollution on the flora and fauna; and the degree of past, present and future utilization of the area.\textsuperscript{174}

It would be premature to expect that pollution be made an international crime for the prevention and suppression of which public vessels of any state, regardless of flag, would be allowed to board a polluting ship and bring it to the nearest port for punishment. At present such jurisdiction exists only in the case of piracy\textsuperscript{175}—and yet the present-day polluter is more dangerous to the order of the oceans than the pirate has ever been.

\textsuperscript{172} Id., art. 23, at 1052; id., art. 46, at 1060; id., art. 50, at 1061.
\textsuperscript{173} See notes 85-96 supra and accompanying text for a discussion of state responsibility for pollution caused by individuals.
\textsuperscript{174} The International Law Association similarly enumerated the factors which should be taken into account in determining the equitable share in beneficial use of the waters of the international river basin to which a co-basin state is entitled. Helsinki Rules on the Uses of the Waters of International Rivers, art. 5, in The International Law Association: Report of the Fifty-Second Conference 477, 488 (1967).