Fordham International Law Journal

Volume 6, *Issue* 1 1982 *Article* 3

Protection of the High Seas from Operational Oil Pollution: A Proposal

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Abstract

The lack of an effective means of preventing oil pollution of the oceans is largely the result of international legal principles which ensure the free use of oceans. Compounding the problem is the fact that flag of convenience registry effectively insulates from regulatory control most vessels that pollute on the high seas, and results in the degredation of the marine environment. Flag of convenience ships are responsible for most operational oil pollution in the high seas which, rather than traumatic oil spills in coastal areas, poses the greatest threat to the environment. Conventions on the high seas currently in force concentrate on pollution that occurs within the jurisdictional limits of a coastal state. These conventions do not establish penalties for pollution on the high seas when there is no direct impact on the interests of a particular state.

NOTES

PROTECTION OF THE HIGH SEAS FROM OPERATIONAL OIL POLLUTION: A PROPOSAL

INTRODUCTION

The lack of an effective means of preventing oil pollution of the oceans[1] is largely the result of international legal principles which ensure the free use of the oceans.[2] Compounding the prob-

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1. The oceans of the world cover approximately 71% of the earth's surface, R. TAIT & R. DE SANTO, ELEMENTS OF MARINE ECOLOGY 1 (1972), and play a vital role in the physical and meteorological maintenance of the planet. Ward & Dubos, *The Oceans*, in THE ECOLOGY OF MAN: AN ECOSYSTEM APPROACH 292 (R. Smith 2d ed. 1976).

> It is the oceans today that provide the water vapor which, drawn up by the sun, falls upon the earth in harvest-bringing, life-sustaining rain. Ocean water is our planet's filtering system where all debris, both mineral and biological, is dissolved, decomposed, and transformed into life-supporting substances. It is the universal global sink, a vast septic tank from which clean water returns to man, beast, and plants by way of evaporation and precipitation. It is a major provider of the oxygen released by its phytoplankton for the benefit of all the species of land, air, and sea—breathing with lungs and gills. Without water's special qualities for holding heat, much of the earth would be uninhabitable. The oceans are the coolants of the tropics, the bringers of warm currents to cold regions, the universal moderators of temperature throughout the globe.

Id.

The organisms that inhabit the oceans represent a major component in the global food chain. Marine phytoplankton (microscopic floating plants) account for nearly thirty percent of the net primary production which takes place on the planet. R. RICKLEFS, THE ECONOMY OF NATURE 124 (1976). The total energy from the sun assimilated through photosynthesis is called gross production. *Id.* at 112. Net primary production represents gross production less the energy utilized by the photosynthetic plants for their own metabolism. A measure of net primary production indicates the amount of energy available to higher levels of the food chain. *Id.* at 112-13. Primary production is the driving force behind the global food chain, as it is the sole means of assimilating energy from *outside* the ecosystem. *Id.* at 110. In addition to its role as a generator of organic nutrition, primary production is important because it generates oxygen as a by-product. W. KEETON, BIOLOGICAL SCIENCE 99-101 (2d ed. 1972).

The effects of oil on the marine environment are disturbing because of the destructive nature and persistence of the pollutant. Schachter & Serwer, *Marine Pollution Problems and Remedies*, 65 AM. J. INT'L L. 84, 88-89 (1971). The marine plankton, because they are surface creatures, are particularly vulnerable to oil pollution. N. MOSTERT, SUPERSHIP 60 (1976).

For a thorough analysis of the myriad effects of oil on the marine environment, see Anderson, *National and International Efforts to Prevent Traumatic Vessel Source Oil Pollution*, 30 U. MIAMI L. REV. 985, 991-98 (1976); Dempsey & Helling, *Oil Pollution by Ocean Vessels—An Environmental Tragedy: The Legal Regime of Flags of Convenience, Multilateral Conventions, and Coastal States*, 10 DEN. J. INT'L L. & POL. 37, 43-48 (1980); Schachter & Serwer, *supra*, at 88-91.

2. *See infra* notes 16-25 and accompanying text.

lem is the fact that flag of convenience registry[3] effectively insulates from regulatory control most vessels that pollute on the high seas, and results in the degradation of the marine environment.[4] Flag of convenience ships are responsible for most operational oil pollution[5] in the high seas which, rather than traumatic oil spills[6] in coastal areas, poses the greatest threat to the environment.[7] Conventions on the high seas currently in force concentrate on pollution that occurs within the jurisdictional limits of a coastal state.[8] These conventions do not establish penalties for pollution on the high seas when there is no direct impact on the interests of a particular state.

The Draft Convention on the Law of the Sea[9] (Draft Convention) is a comprehensive attempt to set forth the rights and obligations of users of the oceans.[10] The Draft Convention contains numerous provisions addressing marine pollution problems, and while it in many ways improves upon previous conventions, it lacks sufficient enforcement provisions.[11]

The Draft Convention provides for action by coastal states in situations where the activities of a ship or of another nation cause pollution in the territorial waters of a coastal state.[12] In addition,

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3. Flag of convenience registry refers to those nations which permit the registration of vessels by foreign shipowners under liberal registration laws. *See infra* notes 26-33 and accompanying text.

4. According to a Vancouver Sun report which was based on a survey of tanker incidents conducted by Lloyd's, Liberian and other flag of convenience vessels were responsible for two-thirds of the oil dumped into ocean and coastal waters as of September 30, 1976. Vancouver Sun, Jan. 5, 1977, at 6, col. 1. *See also* Herman, *Flags of Convenience—New Dimensions to an Old Problem*, 24 McGILL L.J. 1, 2 n.2 (1978).

5. Operational oil pollution includes the intentional discharges of oil that arise from the normal operation of oil storage, transfer, and transportation systems, such as tank cleaning and deballasting. Anderson, *supra* note 1, at 986 n.2.

6. Accidental spillage, due to damage to the oil containment system, is termed "traumatic" oil pollution. *Id.* at n.1.

7. Nearly one and one-half billion gallons of oil are spilled into the oceans annually. Dempsey & Helling, *supra* note 1, at 42. Of that spillage, 80-85% is caused by intentional dumping. *Id.* at 42 n.15.

8. *See infra* notes 64-89 and accompanying text.

9. U.N. Doc. A/CONF.62/L.78 (1981) [hereinafter cited as Draft Convention]. The text of the Draft Convention was approved at the Third United Nations Conference on the Law of the Sea on April 30, 1982 by a vote of 130 in favor of the Draft Convention, 4 opposed (the United States, Turkey, Venezuela and Israel), and 17 abstentions. *U.N. Adopts Sea Law; U.S. Votes No*, N.Y. Times, May 1, 1982, at 9, col. 1.

10. *See infra* notes 91-93 and accompanying text.

11. *See infra* notes 110-115 and accompanying text.

12. Draft Convention, *supra* note 9, art. 220.

the Draft Convention imposes a general obligation on flag states to take steps to ensure that ships under their registry do not pollute.[13] Where pollution by a ship occurs in the territorial waters of a coastal state, or where pollution occurring outside the state's territory affects the state's interests, the Draft Convention allows the coastal state to act directly against the ship.[14] The coastal state must then notify the flag state of the incident and the action taken.[15] However, where pollution occurs outside any state's territorial jurisdiction and does not directly affect the interests of any state, the Draft Convention provides no enforcement mechanism requiring appropriate action by the flag state.

Examination of the basic principles of international law relating to the registration of ships will point out the protection which flags of convenience provide for polluters of the high seas. A discussion of the international conventions already in force and of the antipollution provisions of the Draft Convention will demonstrate the inadequacy of these programs with respect to pollution which occurs on the high seas. An enforcement regime will be proposed to place liability for ocean pollution on the flag state, utilizing the public trust concept to protect the marine environment.

I. *FREE USE OF THE SEAS AND FLAGS OF CONVENIENCE*

Efforts to regulate pollution of the oceans by ships must be framed in accordance with basic principles of international law, which restrict the control that one nation may exercise over the ships of another. Additionally, such efforts must adequately address abuses of these principles engendered by flag of convenience registry.[16]

> International law has long recognized the free access to and use of the high seas by all nations. As the legal regime of maritime transportation has developed, ships have been ascribed a nationality, an attribute which enables them to freely use and enjoy the oceans without being subjected to the jurisdiction of another nation anywhere on the high seas.[17]

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13. *Id.* art. 217.
14. *Id.* art. 220(6).
15. *Id.* arts. 231, 217(6), 217(7).
16. *See* Dempsey & Helling, *supra* note 1, at 40.
17. *Id.*

These principles regarding the free use of the seas are set forth in articles 2 and 5 of the International Convention on the High Seas[18] (High Seas Convention). Article 2 states that because "[t]he high seas [are] open to all nations, no State may validly purport to subject any part of them to its sovereignty."[19] Article 5 of the Convention sets forth the exclusive competency of all states to grant nationality to ships.[20] The principle that vessels on the high seas are subject only to the jurisdiction of the flag state is recognized in international case law[21] and is set forth in article 6 of the High Seas Convention.[22] Exceptions to the exclusive jurisdiction of the flag state traditionally have been recognized in certain limited situations including piracy,[23] slave trade,[24] and hot pursuit.[25]

Several nations have taken advantage of the principles of free access and use of the oceans by adopting ship registration laws which permit foreign vessel owners to register their ships with these nations. These so-called flag of convenience nations utilize permissive registry laws as a means of inducing foreign ship owners to

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18. *Done* Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82 [hereinafter cited as High Seas Convention].

19. *Id.* art. 2.

20. *Id.* art. 5. "Each State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag." *Id.*

21. "[V]essels on the high seas are subject to no authority except that of the State whose flag they fly. In virtue of the principle of the freedom of the [high] seas . . . no State may exercise any kind of jurisdiction upon them." The Case of S.S. Lotus (Fr. v. Turk.), 1927 P.C.I.J., ser. A, No. 9, at 25 (Judgment of Sept. 7). *See also* I. BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 239-42 (3d ed. 1979).

22. High Seas Convention, *supra* note 18, art. 6. "Ships shall sail under the flag of one State only and, save in exceptional cases expressly provided for in international treaties or in these articles, shall be subject to its exclusive jurisdiction on the high seas." *Id.*

The ability of a coastal state to exercise jurisdiction over a foreign vessel is a function of the location of the ship. In internal waters of the coastal state, the vessel is subject to complete regulation. Control over the ship decreases as it proceeds towards the high seas. Anderson, *supra* note 1, at 1001.

23. High Seas Convention, *supra* note 18, arts. 14-21. *See* Sweeney, *Environmental Protection by Coastal States: The Paradigm From Marine Transport of Petroleum*, 4 GA. J. INT'L & COMP. L. 278, 280-85 (1974). *See also* I. BROWNLIE, *supra* note 21, 243-45. This exception is also recognized in the Draft Convention, *supra* note 9, arts. 100-107.

24. High Seas Convention, *supra* note 18, art. 13. Under United States law, vessels engaged in slave trade are subject to seizure, and the persons responsible for the ship are subject to criminal prosecution. 46 U.S.C. §§ 1351-1364 (1976). *See also* I. BROWNLIE, *supra* note 21, at 249; Sweeney, *supra* note 23, at 282-85; Draft Convention, *supra* note 9, art. 99.

25. High Seas Convention, *supra* note 18, art. 23. *See also* I. BROWNLIE, *supra* note 21, at 250-53; Draft Convention, *supra* note 9, art. 111.

register under their flags, a practice which produces substantial revenues for the flag states.[26]

A flag of convenience has been defined as "the flag of any country allowing the registration of foreign-owned and foreign-controlled vessels under conditions which, for whatever the reasons, are convenient and opportune for the persons who are registering the vessels."[27] Because the imposition of ship registration standards is a matter of domestic concern,[28] nations are free to establish liberal registration laws aimed at attracting foreign ship owners.[29] For a small nation with modest shipping needs, money generated from registration fees and charges can have a substantial impact on the nation's income and balance of payments.[30]

An example of a flag of convenience state is Liberia, which boasts the largest maritime fleet in the world.[31] Liberian law has allowed the registration of vessels owned or controlled by foreign citizens or foreign corporations.[32] In contrast, the United States

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26. *See infra* note 30.

27. B. BOCZEK, FLAGS OF CONVENIENCE: AN INTERNATIONAL LEGAL STUDY 2 (1962). *See also OECD Study on Flags of Convenience, reprinted in* 4 J. MAR. L. & COM. 231, 232 [hereinafter cited as *OECD Study*]; Juda, *IMCO and the Regulation of Ocean Pollution from Ships*, 26 INT'L & COMP. L.Q. 558, 577.

28. According to article 5 of the High Seas Convention, a state has exclusive competency to grant to a ship the privilege to fly its flag. High Seas Convention, *supra* note 18, art. 6. *See also* Dempsey & Helling, *supra* note 1, at 58.

29. *See* Dempsey & Helling, *supra* note 1, at 53.

30. *OECD Study*, *supra* note 27, at 232. For an analysis of the financial impact on flag states of revenues derived from vessel registration, see *id.* at 240-41. *See also* Dempsey & Helling, *supra* note 1, at 54.

Typical examples of revenue-generating provisions of flag of convenience registry laws are § 53 and § 54 of Title 22 of the Liberian Code of Laws. 22 LIBERIAN REVISED CODE OF LAWS [LIB. REV. C.L.] §§ 53-54 (1977). Title 22 of the Liberian Code is the Maritime Code of that flag of convenience nation. Section 53 provides for the payment of initial registry fees and administrative charges based on the size of the vessel. *Id.* § 53. Section 54 imposes an annual tax on each vessel registered under the Liberian flag, also based on the size of the ship. This tax is payable in advance, on the first day of the year. *Id.* § 54.

31. Liberia has a merchant fleet of some 72 million registered tons. Panama, another flag of convenience state, is currently in fourth place with 42 million tons, but is expected to overtake Greece for third place by the end of 1982. Japan is currently in second place. *Panama Set to Become 3d Largest Ship Nation*, J. COM., June 17, 1982, at 1B, col. 3. Flag of convenience owners have been in the forefront of the development of the supertankers, with the first 100,000 and 300,000 deadweight ton vessels sailing under the Liberian flag. *OECD Study*, *supra* note 27, at 248. For an analysis of the impact of the rapid growth and development of the supertankers, see generally N. MOSTERT, *supra* note 1, at 84-108.

32. The Liberian Maritime Law states which vessels are eligible for registration under the Liberian flag. 22 LIB. REV. C.L. § 51 (1977). Section 51 allows registration of:

requires that a vessel be owned or controlled by a United States citizen or a United States corporation or partnership in order to be eligible for United States registry.[33]

The advantages to shipowners of flag of convenience registry are numerous, and such registration offers the operator of the vessel a great competitive advantage over ships operated under the more stringent rules of United States or British registry. For example, under United States registry there are strict standards for physicial, professional, educational and service qualifications of the crew,[34] and the shipowner must provide wages and benefits according to United States law.[35] In contrast, a flag of convenience vessel may be operated with a less experienced and less well-paid crew.[36] The United States requires its registered vessels to undergo repairs in United States ports, or they must pay a tax on the repair work performed abroad.[37] Flag of convenience states have no such re-

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> Any sea-going vessel of more than 1600 net tons engaged in the foreign trade, wherever built, owned by a citizen or national of Liberia or owned by a citizen of any foreign country. After January 1, 1975, no such sea-going vessels engaged in the foreign trade, wherever built, shall be eligible for initial documentation or redocumentation unless owned by a citizen or national of Liberia.

Id. § 51(b). Section 51(g) provides that "citizen or national" includes corporations, partnerships and associations of indivduals. *Id.* § 51(g). Under § 51, a foreign owner desiring to register in Liberia must form a Liberian corporation in order to comply with the requirements. Formation of such a corporation is provided for in Title 5 of the Liberian Code, 5 LIB. REV. C. L. § 13.1-.6 (1977), which allows the formation of "foreign maritime corporations" or "maritime trusts" for the purpose of registering and operating vessels under the Liberian flag. *Id.*

33. 46 U.S.C. § 65(b) (Supp. IV 1980).

34. 46 U.S.C. § 672(b) (Supp. IV 1980) sets forth requirements as to qualifications of seamen for service on United States registered vessels. In addition, 46 U.S.C. § 221 (Supp. IV 1980) requires that masters and officers aboard United States registered vessels be United States citizens.

35. 46 U.S.C. §§ 591-608 (Supp. IV 1980) relate to wages for seamen on United States registered vessels. Sections 651-692 set forth the rights and obligations of seamen and shipowners as to living and working conditions aboard United States ships. *See* Dempsey & Helling, *supra* note 1, at 51.

36. Crew cost savings for flag of convenience ships have been estimated to account for 90-95% of the economic advantage that such vessels enjoy over United States registered ships. B. BOCZEK, *supra* note 27, at 32.

37. 19 U.S.C. § 1466 (Supp. IV 1980). The tax on foreign repairs to United States registered ships is imposed in the form of a customs duty levied on the vessel when she calls at a United States port. The provision allows for seizure of the vessel if the owner or master willfully or knowingly fails to report the repairs and pay the appropriate duty. *Id.* § 1466(a).

The competitive disadvantage that this duty on foreign repairs causes for United States shipowners was discussed by the Senate Committee on Interstate and Foreign Commerce when it investigated problems affecting the United States merchant fleet. *See* Final Report of

quirement for domestic repairs,[38] and, in fact, many flag of convenience ships never visit ports in the state of registry.[39] Flag of convenience registry also offers attractive tax advantages to ship owners, because such flag states impose little or no taxes on the income from ships.[40]

United States maritime policy, which encourages a merchant fleet "composed of the best-equipped, safest, and most suitable types of vessels,"[41] is partly responsible for the use of flags of convenience by United States shipowners. In order to maintain a modern United States flag fleet, this country permits transfer of a United States registered ship to foreign registry on condition that the owner replace the vessel with a newly constructed ship under the United States flag.[42] The result is that older ships are transferred

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the Committee on Interstate and Foreign Commerce on Merchant Marine Study and Investigation, S. REP. No. 2494, 81st Cong., 2d Sess. 66, 73 (1950). Despite consideration of the problem, § 1466 remains in effect.

See also B. BOCZEK, *supra* note 27, at 32 (discussing the disadvantage which domestic registry causes for United States shipowners, in contrast with flag of convenience registry).

38. Dempsey & Helling, *supra* note 1, at 50-51.

39. *Id.* at 63.

40. The Liberian Revenue and Finance Law specifically excludes from gross income "all earnings derived from the operation, chartering or disposition of ships and aircraft." 37 LIB. REV. C.L. § 11.23 (1977). For a discussion of the relationship between United States tax law and flag of convenience registry, see Povell, *New Developments in Taxation of Shipping Under Flags of Convenience*, 1977 FORDHAM CORP. L. INST. 211.

41. 46 U.S.C. § 1101 (1976).

42. 46 U.S.C. § 808 (1976) provides that

> it shall be unlawful, without the approval of the Secretary of Commerce, to sell, mortgage, lease, charter, deliver, or in any manner transfer, . . . to any person not a citizen of the United States, or transfer or place under foreign registry or flag, any vessel or any interest therein owned in whole or in part by a citizen of the United States and documented under the laws of the United States, or the last documentation of which was under the laws of the United States.

Id. This provision has been used by the Federal Maritime Administration as a means of implementing the general policy stated in 46 U.S.C. § 1101 (1976), calling for a modern United States flag merchant fleet. *See supra* note 41 and accompanying text.

The Maritime Administration issued a Statement of Policy relating to transfer of vessels from United States flag to foreign registry which provides for a "trade-out-and-build" program. 21 Fed. Reg. 8588 (1956). Under this trade-out-and-build program, a vessel may be transferred to the flags of Panama, Liberia, or Honduras if the United States shipowner will replace the ship with a newly constructed vessel, and provided that the old vessel will remain under United States ownership despite the foreign flag. *Id.* at 8588-89.

In 1981, § 808 was amended to substitute the Secretary of Transportation for the Maritime Administration. Maritime Act of 1981, Pub. L. No. 97-31, § 12(26), 95 Stat. 151, 155 (1981).

See also B. BOCZEK, *supra* note 27, at 33-36.

to flags of convenience where they are manned by less skilled crews than those aboard United States flag ships. The combination of older vessels and less skilled crews increases the likelihood of accidents involving flag of convenience ships.[43]

The economic advantages of flag of convenience registration are not inherently incompatible with an ecologically sound means of oil transportation. However, the failure of flag states to enforce effectively national and international safety and construction standards,[44] coupled with the presence of less skilled crews aboard flag of convenience ships,[45] has contributed to an increase in tanker accidents. Indeed, losses and casualties for flag of convenience vessels have been shown to exceed those for vessels registered in the country of ownership.[46] The net result, whether due to crew deficiencies, inferior ships, or lack of effective enforcement of standards, is that when a ship flies a flag of convenience, the likelihood of mishap is increased[47] while accountability for the spill is lessened.[48]

Effective enforcement of antipollution standards by flag of convenience nations is unlikely for several reasons. First, any effort to regulate the activities of ships under their flags would discourage registration, and would thus defeat the purpose of the flag of convenience nations to attract shipowners.[49] Second, assuming the

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43. *See infra* notes 44-48.

44. Juda, *supra* note 27, at 577. *See also infra*, notes 64-89 and accompanying text.

45. *See, e.g.*, N. MOSTERT, *supra* note 1, at 76-83.

46. *See supra* note 4.

47. In a detailed study, Shell Oil found that

> of forty serious tanker accidents that involved pollution, . . . the common link between all was that "people made silly mistakes."
>
> A very large number of the mistakes seem to be made by ships flying one of the flags of convenience. These countries . . . have dominated the marine casualty lists for some years.

N. MOSTERT, *supra* note 1, at 76.

48. Illustrative of the difficulty of exercising jurisdiction over a flag of convenience ship after an accident are the experiences of the British and French governments after the grounding of the tanker *Torrey Canyon*. The ship was owned by the Barracuda Tanker Corporation, a holding company of the Union Oil Company of California. The vessel was leased to the Union Oil Company and subleased to British Petroleum Trading Limited, a subsidiary of the British Petroleum Company. The *Torrey Canyon* was built in the United States, rebuilt in Japan, and was registered in Liberia. The ship was insured in London and crewed by Italians. N. MOSTERT, *supra* note 1, at 78.

The British and French took a pragmatic approach to the problem of obtaining jurisdiction over any one responsible for the ship. Waiting until one of *Torrey Canyon's* sister ships entered a port where the law was reasonably firm, they seized the ship and held her until the insurers paid over U.S.$7,500,000 as a settlement for the damage caused by the oil spill. *Id.*

49. Dempsey & Helling, *supra* note 1, at 63 (citations omitted).

states did wish to enforce these standards, they are not equipped to do so. Flag of convenience ships rarely sail into ports of their flag country, and the services of the flag of convenience nations are far too small to police the merchant fleets under their flags.[50]

International efforts have been mounted to eliminate flag of convenience registry,[51] but they face strong opposition from flag of convenience nations and from the United States,[52] and little has been accomplished to date.[53] Because of the "abuse . . . of international law by flag of convenience ships,"[54] some means of effectively holding polluters accountable must be developed. Because flag states are responsible for the registration of vessels, and because they have sole jurisdiction over these ships on the high seas, the states themselves should bear responsibility for the conduct of ships flying their flags, in the same way that states have been held liable for environmental injuries emanating from within their borders.[55]

II. *MULTILATERAL EFFORTS TO CONTROL OIL POLLUTION*

A. *The IMCO Conventions*

International environmental problems are usually handled, like other types of international disputes, under the auspices of the United Nations and its numerous specialized agencies.[56] The Inter-

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50. *Id.*

51. The United Nations Conference on Trade and Development has begun work on a convention designed in part to eliminate flags of convenience. The draft convention requires that 50% of the equity in vessels be held in the country of registry, and that the crew be composed of at least 50% flag state nationals. *Open-Registry Debate Commences in Geneva*, J. Com., Apr. 14, 1982, at 24B, col. 1.

52. *U.S., Liberia to Boycott Ship Registry Talks*, J. Com., Apr. 9, 1982, at 12A, col. 2. For a discussion of the connection between United States maritime policy and flags of convenience, see *supra* notes 41 and 42 and accompanying text.

53. The first round of talks aimed at elimination of flags of convenience ended in April 1982. After 17 days of discussion, the only accomplishment was a decision to meet again at an unspecified time in 1983. *Open-Registry Talks End; Little Achieved*, J. Com., Apr. 30, 1982, at 24B, col. 6.

54. Dempsey & Helling, *supra* note 1, at 40.

55. *See infra* notes 120-134 and accompanying text.

56. "The process of authoritative decision maintained by the . . . [international] community for the resolution of environmental controversies and other matters is that of traditional international law, now built about the framework of the United Nations and the specialized agencies and regional organizations." McDougal & Schneider, *The Protection of the Environment and World Public Order: Some Recent Developments*, 45 Miss. L.J. 1085, 1088 (1974).

national Maritime Organization[57] (IMO) is the agency responsible for marine pollution matters.[58] It is among the smallest of the United Nations agencies, and its predecessor, the Intergovernmental Maritime Consultative Organization (IMCO) was established primarily as a "consultative and advisory" body.[59] Nevertheless, IMCO has drafted most of the multilateral conventions on the protection of the marine environment.[60]

In its efforts to limit the pollution of the oceans, IMO must operate within the constraints of international legal principles.[61] International law imposes on users of the oceans (both private and state entities) a duty not to pollute.[62] This basic tenet of international law would appear to give the agency wide latitude in establishing conventions against the pollution of the seas. However, its authority to regulate discharges of pollutants from vessels on the high seas is restricted by principles favoring free use of the seas and by jurisdictional limits based on the nationality of ships.[63]

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57. The International Maritime Organization (IMO) is the successor organization to the Intergovernmental Maritime Consultative Organization (IMCO). *See* Newsbriefs, LLOYD'S MAR. L. NEWSLETTER, May 27, 1982, at 4. Changes to the IMCO Constitution, including the change of name, became effective May 22, 1982. *Id.* IMCO was established by the Convention on the Intergovernmental Maritime Consultative Organization, Mar. 17, 1958, 9 U.S.T. 621, T.I.A.S. No. 4044, 289 U.N.T.S. 48.

58. Although ocean pollution regulation was not among the purposes specified in the IMCO Constitution, the agency was given responsibility in this area from its inception. Juda, *supra* note 27, at 560.

59. *Id.* at 559. *See also* Dempsey & Helling, *supra* note 1, at 66 n.147.

60. Dempsey & Helling, *supra* note 1, at 66. The glacial progress inherent in multilateral negotiations of international environmental issues has often spurred nations to act on these matters unilaterally. Anderson, *supra* note 1, at 1000-01, 1023. For discussions of the role of unilateral actions in international environmental law, see generally Kindt, *Special Claims Impacting Upon Marine Pollution Issues at the Third UN Conference on the Law of the Sea*, 10 CAL. WES. INT'L L.J. 397 (1980); Note, *The International Environmental Law of the Sea: The Canadian Arctic Waters Pollution Prevention Act and its Effects, 1970-1980*, 4 SUFFOLK TRANSNAT'L L.J. 139 (1980). However, the effectiveness of such unilateral measures is "frequently frustrated by the complex legal rules which govern the ability of a coastal nation to regulate foreign vessels." Anderson, supra note 1, at 1001.

61. International law in this sense does not refer to any "formal" source of law, since such a source does not exist in the same way as it would in a nation with a parliamentary government. International law here refers to the "*evidences* of the existence of consensus" among the nations of the world. I. BROWNLIE, *supra* note 21, at 2.

62. "Since the oceans are used by private and state entities, both are responsible when they are remiss in fulfilling this duty [not to pollute]." Teclaff, *International Law and the Protection of the Oceans From Pollution*, 40 FORDHAM L. REV. 529, 541 (1972).

63. *See supra* notes 16-25 and accompanying text.

The first convention aimed at eliminating deliberate marine oil pollution was the International Convention for the Prevention of Pollution of the Sea by Oil, 1954[64] (1954 Convention). The 1954 Convention adopted a zonal approach to marine pollution, in that it prohibited the discharge of oil within fifty miles of land.[65] The 1954 Convention applied to seagoing vessels registered in any of the signatory nations.[66] Vessels were required to maintain an oil record book[67] which was subject to inspection by authorities of any contracting nation.[68] Although amended in 1962,[69] 1969,[70] and 1971,[71] the enforcement provisions of the 1954 Convention were inadequate to significantly lessen oil pollution.[72]

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64. *Opened for signature* May 12, 1954, 12 U.S.T. 2989, T.I.A.S. No. 4900, 327 U.N.T.S. 3 [hereinafter cited as 1954 Convention]. By the time the 1954 Convention entered into force, the IMCO Convention, *supra* note 57, had been ratified by a sufficient number of states to become an agency of the United Nations, and it became the administering agency pursuant to article XXI of the 1954 Convention. 1954 Convention *supra* note 64, art. XXI. Nations which are party to the 1954 Convention account for some 95% of the world's tanker fleet. Mensah, *International Environmental Law: International Conventions Concerning Oil Pollution at Sea*, 8 CASE W. RES. J. INT'L L. 110, 116 (1976).

65. 1954 Convention, *supra* note 64, art. III. While the 1954 Convention established a 50-mile prohibition zone, *id.* at Annex A, it did not extend coastal state jurisdiction to allow enforcement beyond the territorial sea. Article XI states that: "Nothing in the present Convention shall be construed as derogating from the powers of any Contracting Government to take measures within its jurisdiction in respect of any matter to which the Convention relates or as extending the jurisdiction of any Contracting Government." *Id.* art. XI.

66. *Id.* art. II.

67. *Id.* art. IX(1).

68. *Id.* art. IX(2).

69. Prevention of Pollution of the Sea by Oil amends., *adopted* Apr. 11, 1962, 17 U.S.T. 1523, T.I.A.S. No. 6109, 600 U.N.T.S. 332. These amendments extend the application of the 1954 Convention to smaller vessels and establish larger areas within which the discharge of oil is prohibited. *See* Teclaff, *supra* note 62, at 533 nn.18-19.

70. Prevention of Pollution of the Sea by Oil amends., *adopted* Oct. 21, 1969, 28 U.S.T. 1205, T.I.A.S. No. 8505, 9 I.L.M. 1 (1970).

71. Prevention of Pollution of the Sea by Oil amends., *adopted* Oct. 15, 1971, 11 I.L.M. 267 (1972). The 1971 amendments are not yet in force. These amendments primarily address construction standards for tankers, and set requirements for placement of tanks in the vessel.

72. A survey conducted by IMCO in 1962 demonstrated the ineffectiveness of the 1954 Convention with respect to pollution outside territorial waters. Of the 15 offenses detected by the time of the survey, none of them had been successfully prosecuted. Cycon, *Calming Troubled Waters: The Developing International Regime to Control Operational Pollution*, 13 J. MAR. L. & COM. 35, at 39 n.15 (1980).

Although the amendments to the 1954 Convention imposed additional proscriptions on the activities of vessels, they did nothing to provide for effective enforcement of the Convention. *See supra* notes 69-71.

In addition to remedies available under international conventions, a private owner of shoreline property may have a remedy in admiralty for damage caused by oil pollution. *See*

In 1969, IMCO promulgated the International Convention on Civil Liability for Oil Pollution Damage[73] (Civil Liability Convention), which remains the primary convention relating to liability for accidental or intentional damage caused by oil pollution.[74] The Civil Liability Convention 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."[75] Although the Civil Liability Convention is a serious attempt to provide a remedy for damages caused by oil pollution, it applies only to damage caused in the territory of a signatory state.[76] When one considers the potential harm caused by the introduction of oil into the marine environment,[77] it becomes clear that "protection of the world's beaches and protection of the marine ecology itself are not synonomous."[78] The Civil Liability Convention may serve to provide compensation for damaged coastlines, but it does nothing to prevent the discharge of oil on the high seas.

Also adopted in 1969 was the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties[79] (Intervention Convention). The Intervention Convention granted contracting states the right to

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Sweeney, *Oil Pollution of the Oceans*, 37 FORDHAM L. REV. 155, 164-81 (1968). *See also* Roady, *Remedies in Admiralty for Oil Pollution*, 5 FLA. ST. UNIV. L. REV. 361 (1977); Teclaff, *supra* note 62, at 533-34 nn.18-23.

73. *Done* Nov. 29, 1969, 9 I.L.M. 45 (1970) [hereinafter cited as Civil Liability Convention].

74. Dempsey & Helling, *supra* note 1, at 69. In recognition of the financial limitations of the Civil Liability Convention, IMCO adopted the Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, *done* Dec. 18, 1971, 11 I.L.M. 284 (1972). The Fund Convention provided for the establishment of a fund as a supplement to the Civil Liability Convention. Dempsey & Helling, *supra* note 1, at 69.

Oil companies and tanker owners have established two voluntary liability plans, the Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution (TOVALOP), *reprinted in* THE TOKIO MARINE AND FIRE INSURANCE CO., LTD., COLLECTED MARITIME LAWS 371 (1973) [hereinafter cited as COLLECTED MARITIME LAWS], and the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution (CRISTAL), *reprinted in* COLLECTED MARITIME LAWS, *supra* at 380.

75. Teclaff, *supra* note 62, at 541 (footnotes omitted).

76. Civil Liability Convention, *supra* note 73, art. 2.

77. *See supra* note 1.

78. Bleicher, *An Overview of International Environmental Regulation*, 2 ECOLOGY L.Q. 1, 41 (1972).

79. *Done* Nov. 29, 1969, 26 U.S.T. 765, T.I.A.S. No. 8068, 9 I.L.M. 25 (1970) [hereinafter cited as Intervention Convention].

> 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.[80]

Although the Intervention Convention allows a coastal state to act when its shoreline is threatened, it does not permit action by a nation seeking to preserve the overall quality of the marine environment where there is no direct threat to that nation's interests.[81]

The IMCO conventions and the voluntary agreements of the tanker owners[82] represent positive steps in the area of liability for marine pollution. The emphasis of the Civil Liability and the Fund Conventions, however, is on remedies for damages after an oil spill. It is ecologically and economically more effective to prevent the spill than to develop complicated and expensive compensation schemes which do little to restore the ecosystem once it has been damaged.[83]

In 1973, IMCO confronted this problem by adopting the International Convention for the Prevention of Pollution from Ships[84] (Pollution Convention), which goes far beyond the provisions of the 1954 Convention and the amendments thereto. The Pollution Convention prohibits the discharge of any substance which is likely to create a hazard to human health or to harm the living resources of the oceans.[85] It applies not only to tankers, but to all vessels operating on the oceans.[86]

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80. Intervention Convention, *supra* note 79, art. 1. *See generally* Goldie, *International Principles of Responsibility for Pollution*, 9 COLUM. J. TRANSNAT'L L. 283, 301 (1970).

81. *See supra* notes 76-78.

82. *See supra* note 74.

83. Anderson, *supra* note 1, at 987.

84. *Done* Nov. 2, 1973, 12 I.L.M. 1319 (1973) [hereinafter cited as Pollution Convention].

85. *Id.* arts. 1(1), 2(2).

86. *Id.* arts. 3, 2(4). The United States has incorporated into United States law the provisions of the Pollution Convention, along with those of a Protocol to the Convention adopted in 1978. 33 U.S.C. §§ 1901-1911 (Supp. IV 1980). In addition to these provisions, Congress recognized that "navigation and vessel safety and protection of the marine environment are matters of major national importance," *id.* § 1221(a), and it enacted sections, which provide for the establishment of vessel traffic control services to lessen the likelihood of collision. *Id.* 1221-1223.

Despite the strength of the Pollution Convention with respect to violations within territorial waters,[87] it remains ineffective as to violations which occur on the high seas. The observing state may notify the flag state of such incidents, but it is then the responsibility of the flag state to take action.[88] Where the polluting ship flies a flag of convenience, it is not likely that the flag state will act.[89]

B. *The Draft Convention on the Law of the Sea*

The most recent efforts to control marine pollution are embodied in the Draft Convention on the Law of the Sea.[90] This draft is the work of the Third United Nations Conference on the Law of the Sea (UNCLOS III). UNCLOS III was convened in 1973, the result of a United Nations General Assembly Resolution calling for a:

> conference on the law of the sea which would deal with the establishment of an equitable international régime—including an international machinery—for the area and the resources of the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, a precise definition of the area, and a broad range of related issues including those concerning the régimes of the high seas, the continental shelf, the territorial sea . . . and contiguous zone, fishing and conservation of the living resources of the high seas (including the question of the preferential rights of coastal States), the preservation of the marine environment (including, *inter alia*, the prevention of pollution) and scientific research.[91]

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87. Article 4 of the Pollution Convention allows a State to act under its own laws against ships for violations which occur while the ship is within the State's jurisdiction. The State may also notify the flag state of the violation and allow the flag state to take appropriate steps. Pollution Convention, *supra* note 84, art 4; *cf.* Draft Convention, *supra* note 9, art. 218 (provisions for port state jurisdiction). *See also infra* notes 114-15 and accompanying text.

88. *Id.*

89. *See supra* notes 44-50 and accompanying text.

90. *Supra* note 9.

91. G.A. Res. 2750, 25 U.N. GAOR Supp. (No. 28) at 242, U.N. Doc. A/RES/2750 (1970). The General Assembly assigned the Committee on the Peaceful Uses of the Sea-bed and the Ocean Floor (Sea-bed Committee) the task of conducting preparatory work for the conference. *Id.* In 1972, the Sea-bed Committee reported that it had developed a list of issues relating to the law of the sea that would serve as a framework for discussion and drafting of

The Draft Convention represents an unusual step in international environmental regulation in that the antipollution provisions contained therein were negotiated in conjunction with a broad range of nonpollution issues. Historically, the response of the international community to environmental problems has been piecemeal[92] and ex post facto.[93] Developing an antipollution regime as

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an international regime pursuant to Resolution 2750. Report of the Committee on the Peaceful Uses of the Sea-bed and the Ocean floor beyond the limits of National Jurisdiction, 27 U.N. GAOR Supp. (No. 21) at 5, U.N. Doc A/8721 (1972).

The first sessions of UNCLOS III were largely procedural. At a session held in New York in 1973, the conference decided to establish three main committees, each responsible for negotiation of particular issues, and a Drafting Committee, responsible for drafting the convention eventually negotiated. Statement of Activities of the Conference During its First and Second Sessions, 3 Third U.N. Conference on the Law of the Sea OR [UNCLOS III OR] at 93, 95, U.N. Doc. A/CONF.62/L.8/REV.1 (1974). At the second session, the issues identified in the Sea-bed Committee's list were apportioned among the three main committees, with Committee III given responsibility for issues relating to the preservation of the marine environment. 3 UNCLOS III OR at 97-98.

Although the three negotiating committees held formal meetings, the bulk of the work was conducted in informal sessions at which no records were kept. 2 G. TIMAGENIS, INTERNATIONAL CONTROL OF MARINE POLLUTION 583 (1980). Reports on the work of the various committees appear as summaries presented by the chairmen of the committees, which are published throughout the official records of UNCLOS III.

By the end of the third session of UNCLOS III in 1975, the Chairmen of the three committees had drafted an Informal Single Negotiating Text (SNT), 4 UNCLOS III OR at 137, U.N. Doc. A/CONF.62/WP.8 (1975). The SNT reflected the work which had been accomplished at the formal and informal discussions of the Committees. 4 UNCLOS III OR at 19, 26, U.N. Doc. A/CONF.62/L.2/Add.1 para.92 (1975). The SNT would serve as the basis for negotiations in subsequent sessions of the conference. *Id. See also Recent Developments in the Law of the Sea: A Synopsis*, 13 SAN DIEGO L. REV. 628, 629 (1976).

Discussion at the fourth session of UNCLOS III was based on the SNT, and the results of those talks were incorporated into the Revised Single Negotiating Text (RSNT). 5 UNCLOS III OR at 125, U.N. Doc. A/CONF.62/WP.8/REV.1 (1976), which was presented at the end of the session.

Subsequent sessions of the conference produced an Informal Composite Negotiating Text (ICNT), 8 UNCLOS III OR at 1, U.N. Doc. A/CONF.62/WP.10 (1977) [hereinafter cited as ICNT], and two revisions of the ICNT, U.N. Doc. A/CONF.62/WP.10/Rev.1, *reprinted in* 18 I.L.M. 686 (1979) [hereinafter cited as ICNT/R], and U.N. Doc. A/CONF.62/WP.10/Rev.2 (1980) [hereinafter cited as ICNT/R2].

92. The piecemeal response of authorities to international environmental problems reflects the lack of a unified conceptual framework for addressing such problems. The result is that environmental efforts are often directed at a single problem, such as oil, radioactive wastes or other toxic substances, and they focus on particular sources of pollutants, such as vessels or drilling rigs, rather than taking a comprehensive approach to environmental regulation. Bleicher, *supra* note 78, at 2-5.

This method of solving ecological problems is perhaps understandable, though not excusable, in light of the nature of environmental regulation. Such regulation is geared toward prevention or modification of activities which may cause damage to individuals as

part of an overall plan for the oceans may result in a more effective mechanism for protecting the oceans.

The Draft Convention addresses a wide range of ocean related issues, including jurisdiction over territorial waters,[94] areas of the oceans adjoining territorial waters,[95] and matters relating to the use of the high seas.[96] A substantial portion of the Draft Convention addresses the orderly exploitation and development of the oceans,[97] but UNCLOS III was also given the task of establishing a regime related to the preservation of the oceans.[98] As a result, the Draft Convention contains numerous marine pollution provisions.[99]

The marine pollution provisions in the Revised Informal Negotiating Text[100] are essentially the same as those appearing in the Draft Convention.[101] A number of provisions of the Draft Conven-

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well as to the ecosystem. Unlike consumer protection or workman's compensation, the victims of environmental damages are generally not contractually related to the tortfeasors whose activities cause the injury, and therefore the interests of these non-related parties are overlooked. *Id.* at 6.

93. Environmental remedies have historically been applied ex post facto, which is clearly an unwise approach due to the inherent inaccuracies in estimating the degree of pollution which a given ecosystem can withstand. Kindt, *Prolegomenon to Marine Pollution and the Law of the Sea: An Overview of the Pollution Problem*, 11 ENV. L. 67, 68 (1980).

An excellent example of ex post facto environmental action is the response of the international community to the wreck of the *Torrey Canyon*, a supertanker which broke up off the coast of Brittany. The disaster caused the Intergovernmental Maritime Consultative Organization to promulgate the International Convention on Civil Liability for Oil Pollution Damage and the Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. Cusine, *Liability for Oil Pollution Under the Merchant Shipping (Oil Pollution) Act*, 10 J. MAR. L. & COM. 105, 107 (1978). *See also Report on International Control of Oil Pollution*, H.R. REP. No. 628, 90th Cong., 1st Sess. 6 (1967).

94. *See* Draft Convention, *supra* note 9, arts. 2-32.

95. *Id.* arts. 33, 55-75.

96. *Id.* arts. 86-120.

97. Part XI of the Draft Convention relates to the rights of various parties with respect to the "Area." *Id.* arts. 133-191. The Area is defined in article 1 as "the sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction." *Id.* art. 1(1). Articles 150-155 concern the development of the resources (living resources as well as mineral resources) of the Area. Sections 4 and 5 of Part XI set forth provisions for the establishment of an Authority to administer the Convention, as well as provisions for the settlement of disputes arising out of the use of the Area.

98. *See supra* note 91.

99. *See* Draft Convention, *supra* note 9, arts. 192-237.

100. *See supra* note 91.

101. *Compare* ICNT/R, *supra* note 91, arts. 192-237 *with* Draft Convention, *supra* note 9, arts. 192-237. The issues related to sea-bed mining and transfer of technology have proven particularly difficult to negotiate. *See, e.g., Synopsis: Recent Developments in the Law of the Sea 1978-1979*, 17 SAN DIEGO L. REV. 691, 694-98 (1980) [hereinafter cited as *Synopsis: 1978-*

tion address marine pollution indirectly in the context of coastal state jurisdiction[102] and flag state duties,[103] but the bulk of the pollution provisions are contained in Part XII of the Draft Convention.[104]

The provisions of Part XII require states to ensure that activities under their jurisdiction do not cause damage by pollution to other states.[105] Article 211 of the Draft Convention requires that the states, through appropriate international organizations, establish international standards for the prevention of pollution from vessels.[106] It also requires that individual states adopt laws and regulations to control pollution from ships flying their flags.[107] Under this provision, the rules adopted by the flag state must be at least as effective as the international standards.[108] Unfortunately, the Draft Convention itself does not provide any such standards, but leaves the establishment of pollution standards for future negotiation.[109]

Articles 213 through 236, relating to enforcement of antipollution measures, contain the most serious weaknesses of the Draft Convention. Article 217 requires flag states to ensure that their registered ships comply with domestic and international standards.[110] Flag states are to prohibit ships under their registry from sailing unless they comply with these standards.[111] The ability of a flag of convenience nation to effectively monitor the condition of its

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1979]; *Synopsis: Recent Developments in the Law of the Sea 1979-1980*, 18 SAN DIEGO L. REV. 533, 535-44 (1981).

The marine pollution issues were negotiated much more quickly. The Chairman of Committee III, in his report after the eighth session, indicates that the substantive negotiations on protection and preservation of the marine environment could be considered closed. U.N. Doc. A/CONF.62/L.34 para.12 (1979). *See also Synopsis 1978-1979*, *supra*, at 700.

102. *See* Draft Convention, *supra* note 9, arts. 19(2)(h), 21(1)(d) & (f), 56(1)(b)(iii).

103. *See id.* art. 94(7).

104. *Id.* arts. 192-237.

105. *Id.* art. 194(2).

106. *Id.* art. 211(1).

107. *Id.* art. 211(2).

108. *Id.*

109. The absence of such standards is perhaps understandable when one considers that the aim of the pollution provisions is not direct regulation, but the identification of who is going to establish the substantive rules on regulation of pollution. With that aim in mind, it is not surprising that the Draft Convention avoids addressing technical matters, and concentrates on statements of the rights and obligations of the various parties. G. TIMAGENIS, *supra* note 91, at 603.

110. Draft Convention, *supra* note 9, art. 217(1).

111. *Id.* art. 217(2).

registered ships is doubtful, especially in view of the small size of their navies and the infrequency with which the ships visit ports in the flag state.[112]

Articles 218 and 220 address the enforcement of pollution provisions by port states and coastal states, respectively. Article 220 provides for enforcement by a coastal state for violations which occur within its jurisdiction.[113] A coastal state is the obvious party to act against pollution which occurs in its own jurisdiction.

The Draft Convention permits a port state, while a ship is voluntarily in its port, to undertake investigations with respect to violations which occurred outside its jurisdiction.[114] Paragraph 2 of article 218 indicates, however, that a port state cannot act with respect to violations which occur in another state's jurisdiction.[115] Taken together, the paragraphs indicate that a port state may initiate actions against a ship which has polluted on the high seas since it is not within the jurisdiction of another state. Such authority would be a useful mechanism for enforcement, but it places the burden of action on the port state, although the benefits of such action would accrue to the international community collectively.

Article 235 indicates that contracting states "are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law."[116] Although this is a great step forward in establishing state liability for pollution of the oceans from ships, it does not provide any real penalties for states which fail to meet these obligations, nor does it serve to discourage flag of convenience registry.

The provisions of the Draft Convention are significant in that they are not framed as isolated responses to environmental problems, but as integral elements of an international effort to set forth the law of the sea. However, an effective regime to prevent pollution of the oceans requires, in addition to the imposition of obligations on parties that use the oceans, the establishment of an authority to enforce these obligations with respect to violations which occur outside the jurisdiction of any particular state.

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112. *See supra* text accompanying note 50.
113. Draft Convention, *supra* note 9, art. 220.
114. *Id.* art. 218(1).
115. *Id.* art. 218(2).
116. *Id.* art. 235(1).

III. *THE INTERNATIONAL LEGAL FRAMEWORK*

Because of the principle of international law that ships on the high seas are subject to the exclusive jurisdiction of the flag state,[117] and because of the problems associated with the flags of convenience,[118] it is apparent that a body of international law must be developed to make the flag states themselves liable for environmental damage caused by their ships. International case law "clearly point[s] to the emergence of strict liability [for environmental injury] as a principle of public international law."[119]

In the *Corfu Channel Case*,[120] British warships passing through Albanian territorial waters unknowingly entered a minefield, resulting in a number of deaths and personal injuries to British sailors and damage to several British vessels. Despite the fact that Albania had not laid the minefield and claimed ignorance of its existence, the International Court of Justice inferred Albanian knowledge of the danger and found for the British. The Court found that "every [State has an] obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."[121] Although the military context of the *Corfu Channel Case*

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117. High Seas Convention, *supra* note 18, art. 6(1). *See also* Draft Convention, *supra* note 9, art. 92.

118. *See supra* notes 16-55 and accompanying text.

119. Goldie, *International Principles of Responsibility for Pollution*, 9 COLUM. J. TRANSNAT'L L. 283, 306 (1970).

The notion of state liability for the activities of private entities under its jurisdiction is not completely new. This principle appears, for example, in the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *done* January 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205. Article VI of the Treaty provides that: "States Parties to the Treaty shall bear international responsibility for national activities in outer space . . . . whether such activities are carried on by government agencies or by non-governmental entities." *Id.* art. VI.

The Convention on International Liability for Damage Caused by Space Objects, *done* March 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, 11 I.L.M. 250 (1972), provides, in article II, that: "A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight." *Id.* art. II. Article I(c) of the Space Objects Liability Convention defines "launching State" as "(i) a State which launches or procures the launching of a space object; (ii) a State from whose territory or facility a space object is launched." *Id.* art. I(c).

For a discussion of state liability under the Space Objects Liability Convention, see Christol, *International Liability for Damage Caused by Space Objects*, 74 AM. J. INT'L L. 346 (1980).

120. (U.K. v. Alb.), 1949 I.C.J. 4 (Judgment of Apr. 9).

121. *Id.* at 22. *See* Bleicher, *supra* note 78, at 16.

removes it from the realm of "typical" transnational environmental law cases,[122] the decision is nevertheless useful as a basis for establishing direct state responsibility for environmental injury by analogy.[123]

The *Trail Smelter Arbitration*[124] directly addresses state liability for extraterritorial environmental injury caused by a private concern within its territory. The case involved damages caused by sulphur dioxide fumes emanating from a copper smelting plant at Trail, British Columbia. The smelter was operated by a company incorporated under a Canadian charter.[125] The governments of the United States and Canada began discussion of the matter in 1927,[126] and in 1935 they entered into a convention for the establishment of a tribunal to resolve the dispute.[127]

The tribunal, in deciding for the United States, held that "under the principles of international law . . . no State has the right to use or permit the use of its territory in such manner as to cause injury . . . in or to the territory of another . . . ."[128] Furthermore, the tribunal held that "the Dominion of Canada is responsible in international law for the conduct of the Trail Smelter."[129]

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122. Bleicher, *supra* note 78, at 17.

123. *Id.*

124. (U.S. v. Can.), 3 R. Int'l Arb. Awards 1905, *reprinted in* 35 AM. J. INT'L L. 684 (1941).

125. *Id.* at 1917, 35 AM. J. INT'L L. at 692-93.

126. The initial complaints in the case came in 1925, when a number of property owners in Washington complained to the Trail Smelter Company. *Id.* at 1917, 35 AM. J. INT'L L. at 693. These complaints led to private settlements between the company and the property owners. *Id.*

The United States government took up the matter with the Canadian government in 1927, and it was referred to the International Joint Commission between the United States and Canada. This Commission was established pursuant to article IX of the Convention of January 11, 1909, between the United States and Great Britain. Under that convention, questions arising between the two nations were to be referred to the International Joint Commission which would examine the matter and report its findings. Reports of the Commisssion were not, however, binding. *Id.* at 1918, 35 AM. J. INT'L L. at 693.

The Commission considered questions relating to the Trail Smelter between October, 1928 and February, 1930. It issued its final report in February, 1931. *Id.*

127. Convention between the United States of America and the Dominion of Canada relative to the establishment of a tribunal to decide questions of indemnity and future regime arising from the operation of smelter at Trail, British Columbia, Apr. 15, 1935, United States—Canada, 49 Stat. 3245, T.S. No. 893.

128. 3 R. Int'l Arb. Awards at 1965, 35 AM. J. INT'L L. at 716.

129. *Id.* at 1965-66, 35 AM. J. INT'L L. at 716-17.

In *Lake Lanoux Arbitration*,[130] a dispute arose between Spain and France over the latter's proposal to build a hydroelectric power project. Spain objected on the grounds that the project would divert water from Lake Lanoux. France won the arbitration, after showing that it would take steps to replace the water lost with an equal quantity of water from a nearby river. The replacement water would be of comparable quality to that which was lost. While the *Lake Lanoux Arbitration* is not, strictly speaking, an "environmental law" case, in that it is based on the conflict between the property rights of riparian owners, the case is relevant because it establishes that a nation is not entitled to unrestricted use of waters, but must consider the consequences to others with interests in the water.[131]

The three cases together establish

> a consistent . . . set of principles governing state responsibility for transnational environmental damage. The overriding proposition is that a state may not use or permit the use of its territory in such a manner as to cause substantial damage in another state. . . . The restriction extends beyond state-initiated activity to private activity, which will be imputed to the defendant state if it knew of its injurious character.[132]

The case law therefore indicates that a state is liable for damages caused by the activities of its own instrumentalities or those of a private enterprise under its jurisdiction. Although the cases discussed dealt with injuries which arose within the territories of the states in question, these principles may be extended to apply to incidents which arise outside the territory of the defendant state, but where the wrongdoer is nonetheless subject to the defendant state's jurisdiction.

It is true that states are free to grant nationality to ships,[133] but it is equally true that "international law gives to states . . . the mandate to employ their sovereignty in such a way that they do not violate international law."[134] Just as the copper plant in the *Trail*

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130. (Spain v. Fr.), 12 R. Int'l Arb. Awards 281 (1963), *reprinted in* 53 AM. J. INT'L L. 156 (1959).

131. Bleicher, *supra* note 78, at 25-26.

132. *Id.* at 28.

133. *See supra* text accompanying notes 28-29.

134. H. MEYERS, THE NATIONALITY OF SHIPS 108 (1967).

Smelter Arbitration was operating under Canadian charter, a vessel on the high seas operates under the privileges of nationality granted by the flag state. If a nation is liable for the conduct of a corporation operating within its borders, a flag state should bear liability for actions of its vessels on the high seas where the flag state has exclusive jurisdiction over the ship.

IV. *THE PROPOSED ENFORCEMENT REGIME*

A. *The Public Trust Doctrine*

Adoption of an approach whereby flag states would be liable for damages to the oceans by their ships[135] would not, in itself, solve the problem of pollution on the high seas. Because pollution on the high seas may not directly affect the interests of an individual state, and because international law prohibits the exercise of sovereignty over the high seas,[136] an international body with authority to act against flag states for pollution by their ships must be recognized.

The public trust doctrine provides a suitable legal basis for the creation of such an authority to protect the oceans. The public trust doctrine recognizes that "certain defined property is held . . . in trust [by the state] for the public,"[137] and that the trustee "has a high fiduciary duty of care and responsibility to the general public."[138] The modern public trust doctrine has its roots in the Roman concept of *res communes*, the principle that some forms of property are incapable of exclusive ownership.[139] Under Roman law the doctrine of *res communes* applied to "the common property of all: air, running water, the sea, and with it the shores of the sea."[140]

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135. *See supra* notes 116-133.

136. High Seas Convention, *supra* note 18, art. 2.

137. Nanda & Ris, *The Public Trust Doctrine: A Viable Approach to International Environmental Protection*, 5 ECOLOGY L.Q. 291, 296 (1976).

138. Cohen, *The Constitution, the Public Trust Doctrine, and the Environment*, 1970 UTAH L. REV. 388.

139. Coquillette, *Mosses From an Old Manse: Another Look at Some Historic Property Cases About the Environment*, 64 CORNELL L. REV. 761, 800 (1979).

140. F. DE ZULUETA, THE INSTITUTES OF GAIUS 2.1.1 (1953) (*quoted in* Coquillette, *supra* note 139, at 801). Along with *res communes*, Roman law recognized *res religiosae*, items which because of their sacred nature were protected from use in commerce. BLACK'S LAW DICTIONARY 1174 (rev. 5th ed. 1979). It also recognized *res nullius*, items which were not susceptible of private ownership. *Id.*

The *res communes* doctrine entered English law early, and by the sixteenth century the doctrine was developed to the point where a private remedy for disturbance of the *res communes* (the forest) had been created. Coquillette, *supra* note 139, at 804-06. In the

The doctrine exists in various forms in many countries, although it is not as developed as it is in the United States.[141] However, "[t]he principles of public trust are such that they can be understood and embraced by most countries of the world."[142] For example, under the French Civil Code resources such as highways, streets, navigable rivers, streams, canals, the sea coast, ports and bays are within the public domain,[143] and the government is charged with the supervision and maintenance of the resources.[144] Several contemporary European systems of wildlife management share the notion that free-living wild animals are ownerless,[145] a notion derived from the Roman concept of *res nullius*.[146] Although the party charged with management of the wildlife varies widely,[147] some authority is identified which is responsible for protecting the resources.[148] More akin to the United States concept of the public trust is the Mexican law of common use property.[149]

United States, the doctrine of *res communes* was recognized by the Supreme Court in Illinois Central R.R. v. Illinois, 146 U.S. 387 (1892). This case involved a grant to the railroad of submerged lands in the Chicago harbor. In voiding the grant, the Court held that the state possessed the land "in trust for the people of the State." 146 U.S. at 452.

The public trust doctrine has been applied in a number of recent cases. In North Dakota *ex. rel.* Bd. of Univ. & School Lands v. Andrus, 506 F. Supp. 619 (D.N.D. 1981), the district court denied a claim of adverse possession by the United States with respect to certain lands under the Little Missouri River. The court held that because North Dakota held the lands in trust for the people of the state, it "[could] never abdicate its trust obligation." 506 F. Supp. at 625.

New Jersey courts have recently applied the doctrine in determining the rights of parties to recreational uses of beaches. *See, e.g.*, Capano v. Borough of Stone Harbor, 530 F. Supp. 1254 (D.N.J. 1982); Van Ness v. Borough of Deal, 78 N.J. 174, 393 A.2d 571 (1978); Borough of Neptune City v. Borough of Avon-by-the-Sea, 61 N.J. 296, 294 A.2d 47 (1972).

141. Nanda & Ris, *supra* note 137, at 306.

142. *Id.*

143. 2 C. AUBRY & C. RAU, DROIT CIVIL FRANÇAIS 51-52 (P. Esmein 7th ed. 1961) (citing CODE CIVIL art. 538 (81st ed. Petits Codes Dalloz 1981-82)).

144. *Id.* at 50.

145. Wolfe, *European Wildlife Administration*, in WILDLIFE LAW ENFORCEMENT 28, 31 (W. Sigler 3d ed. 1980).

146. *Id.* at 29.

147. In the German speaking countries of Europe, the unit of wildlife management is the hunting district, or *revier*. Wolfe, *supra* note 144, at 33. The owner of the hunting rights for the *revier* (either the landowner or a tenant) is the custodian of the wildlife in the district and is under moral and social obligations to preserve the wildlife for the remainder of society. *Id.* at 34-35.

In the communist countries of Eastern Europe hunting rights are controlled by the state, which establishes hunting districts and manages the wildlife. *Id.* at 34.

148. *See supra* note 146.

149. Under the Mexican Civil Code, public property is categorized as *bienes de uso común*, property for common use, *bienes destinados a un servicio público*, property destined

Under the Mexican Civil Code, common use property is identified as *bienes de uso común*,[150] which includes the seashore, harbors, bays, rivers, streams and highways.[151] *Bienes* consist of three categories, depending upon whether they can be owned privately, held in trust by a municipality, or not subjected to ownership.[152]

The public trust doctrine is "readily adaptable to the whole range of issues that comprise our environmental dilemma."[153] The flexibility of the doctrine in adjudicating environmental issues is seen in several cases in which it has been applied. In *Smoke Rise, Inc. v. Washington Suburban Sanitary Commission*,[154] real estate developers challenged a ban on additional sewer hookups which two counties had instituted. The developers claimed that the ban constituted a taking within the meaning of the Fifth Amendment, and that they were deprived of property rights without due process. In denying the plaintiffs' claims, the district court noted that the ban was designed to prevent pollution of the rivers and streams in the area due to overloaded sewage treatment systems. The court wrote: "In their natural state, the streams and rivers of Prince George's and Montgomery Counties are unpolluted. Through the public trust doctrine, the State of Maryland has the duty of preserving the natural, unpolluted condition of these waterways."[155]

In *Commonwealth of Puerto Rico* v. *Steam Ship Zoe Colocotroni*,[156] the Court held that the Commonwealth had standing to sue the owners of a ship which spilled oil into a bay in southwestern Puerto Rico. The court found that the Commonwealth had standing based upon its proprietary interest in the bay and "because it is the trustee of the public trust" in the resources which were damaged by the spill.[157] Likewise in *In re Steuart Transportation Co.*,[158]

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for public service use, and *bienes propios*, property for special use. CODIGO CIVIL art. 767 (46th ed. Editorial Porrua 1979) (Mex.). *See also* Note, *California Beach Access: The Mexican Law and the Public Trust*, 2 Ecology L.Q. 571, 601 (1972). The *bienes propios* is similar to our concept of public domain, and this property could be used by the government as a source of revenue. *Id.* at 601-02.

150. *See supra* note 149.

151. Note, *supra* note 149, at 602.

152. *Id.* at 603.

153. J. SAX, DEFENDING THE ENVIRONMENT 172 (1971).

154. 400 F. Supp. 1369 (D. Md. 1975).

155. *Id.* at 1382.

156. 456 F. Supp. 1327 (D.P.R. 1978), *aff'd*, 602 F.2d 12 (1st Cir. 1979), *modified*, 628 F.2d 652 (1st Cir. 1980), *cert. denied*, 450 U.S. 912 (1981).

157. *Id.* at 1337.

158. 495 F. Supp. 38 (E.D. Va. 1980).

the district court held that although certain migratory waterfowl which were killed by an oil spill were not owned by the State of Virginia or by the Federal Government, both could maintain actions against the defendant for the damages to these animals under the public trust doctrine and under the doctrine of *parens patriae*.[159] The court noted that "[u]nder the public trust doctrine, the State of Virginia and the United States have the right and duty to protect and preserve the public's interest in natural wildlife resources. Such right does not derive from ownership of the resources but from a duty owing to the people."[160]

The public trust doctrine would provide a suitable means of protection of the high seas from oil pollution. Because the high seas are not subject to ownership by individual claims, a public trust approach would give a recognized trustee the right to act on behalf of the general public.

B. *Application of the Public Trust Doctrine to the Marine Environment*

It has been suggested that the public trust doctrine provides the necessary legal underpinnings for international environmental law.[161] Such an approach calls for an international trustee to act against polluters in areas where individual states lack jurisdiction, or where they are not directly affected by the injury to the environment. In the area of protection of the marine environment a logical choice for an international public trustee would be the Authority provided for in Part XI of the Draft Convention on the Law of the Sea.[162]

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159. *Id.* at 40.

160. *Id.*

161. *See generally*, Nanda and Ris, *supra* note 137. Nanda and Ris also suggest that the United Nations would be the appropriate body to enforce the trust. *Id.* at 314-15.

Certain elements of the public trust doctrine are already present in international law. For example, the principle that no state may exercise sovereignty over the high seas, *see* High Seas Convention, *supra* note 18, art. 2; Draft Convention, *supra* note 9, art. 89, is similar to the doctrines of *res communes* and *res nullius*. *See supra* note 140. Article 136 of the Draft Convention indicates that the high seas and the sea-bed are the common heritage of mankind. Draft Convention, *supra* note 9, art. 136.

162. *See* Draft Convention, *supra* note 9, arts. 156-185. The Authority would consist of an Assembly, a Council, and a Secretariat. *Id.* arts. 159-169. The Draft Convention gives the Authority legal status to implement the provisions of the agreement, and to ensure that the objectives of the convention are met. *Id.* arts. 157, 176.

The Draft Convention recognizes the invalidity of claims of sovereignty over the high seas[163] and the Area.[164] The invalidity of such claims precludes action by an individual state where there is no direct impact on the state's interests. However, the Draft Convention also recognizes that "[t]he Area and its resources are the common heritage of mankind,"[165] and that "[a]ll rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act."[166] The Draft Convention additionally states that the Authority shall adopt rules, regulations and procedures for "the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment."[167]

Because the high seas and the Area are not subject to exclusive ownership and because they are recognized as the common heritage of mankind, application of the public trust doctrine is an appropriate measure to ensure the protection of the marine environment.[168] The obligations of the Authority under the Draft Convention impose upon it duties to take steps to preserve the oceans for the benefit of mankind; the Authority is, therefore, the appropriate body to act as the trustee.[169]

The Authority would also function as the administrator of all the activities under the Draft Convention, which would allow it to implement environmental protection measures in conjunction with plans to develop the resources of the oceans. In this way, the Authority could avoid the problems of ex post facto environmental measures.[170] The Authority would be in a position to promulgate development schemes which are environmentally and economically sound at the outset, rather than apply subsequent compensation schemes for ecological damages caused as a result of the activity.

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163. *Id.* art. 89.

164. *Id.* art. 137(1). The "Area" is defined as "the sea-bed and the ocean floor and the subsoil thereof beyond the limits of national jurisdiction." *Id.* art. 1(1).

165. *Id.* art. 136.

166. *Id.* art. 137(2).

167. *Id.* art. 145(b).

168. *See supra* note 161.

169. The obligation imposes a fiduciary duty owing to the people of the world. Such a fiduciary duty is one of the obligations of the public trustee under the public trust doctrine. *See* Cohen, *supra* note 138, at 388.

170. *See supra* notes 92-93 and accompanying text.

CONCLUSION

"Because our oceans cannot be fenced and hence made private property,"[171] they remain susceptible to the "tragedy of the commons."[172] In order to avoid the complete degradation of the oceans, and with it the earth itself,[173] there must be an enforceable regime to protect the seas from operational oil pollution. "While the . . . traditional notions of the law of the seas . . . placed the right and obligation of regulating ships upon the flag state, contemporary experience has proven that this regime is wholly inadequate" for tanker regulation.[174]

The antipollution provisions of the Draft Convention on the Law of the Sea[175] could prove useful in eliminating marine pollution if, in addition to these provisions, an effective enforcement mechanism is adopted. United Nations recognition of the public trust doctrine in the area of preservation of the marine environment "would provide an authoritative basis for encouraging and promoting a wider acceptance of the notion that states are responsible not only to their own nationals, but also to all humankind for the maintenance, preservation, and conservation of selected uses and resources."[176] Adoption of the public trust doctrine and appointment of the Authority as the international public trustee would permit effective enforcement of antipollution measures for the benefit of the international community.

Application of the principles established in the *Corfu Channel Case* and the *Trail Smelter* and *Lake Lanoux* arbitrations[177] would create in the public trustee a right of action against flag states whose ships pollute the high seas. Such liability on the part of the flag state would perhaps serve as sufficient incentive to ensure that their registered ships comply with international standards regard-

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171. Dempsey & Helling, *supra* note 1, at 39.

172. Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968). The underlying notion of the tragedy of the commons is that

> rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of "fouling our own nest," so long as we behave only as independent, rational, free-enterprisers.

Id. at 1245.

173. *See supra* note 1.

174. Dempsey & Helling, *supra* note 1, at 65. *See also supra* notes 17-50.

175. *See supra* notes 105-16 and accompanying text.

176. Nanda & Ris, *supra* note 137, at 314.

177. *See supra* notes 117-34 and accompanying text.

ing the pollution of the oceans, and would thereby defeat the abuses of flag of convenience registry. This approach to flag state liability would not interfere with the sovereign rights of the flag state, nor would it impinge upon the rights of free access to and use of the oceans. The result of such a regime would be that if a state wished to maintain a flag of convenience and to register ships which do not meet international standards, it would do so at its own economic risk.

The potential threat to the oceans, and therefore to the entire ecosystem, is such that some action must be taken. "That the very seas should be considered a wasting asset must surely be the essential nightmare of the whole business of the despoliation of this planet . . . ."[178]

Barney T. Levantino

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178. N. MOSTERT, *supra* note 1, at 60.