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Oil Pollution by Ocean Vessels - An Environmental Tragedy: The Legal Regime of Flags of Convenience, Multilateral Conventions, and Coastal States

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Oil Pollution, Pollution, States, Vessels, Economics, International Law: History, Politics, Liability

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PAUL STEPHEN DEMPSEY AND LISA L. HELLING

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I. INTRODUCTION

The West depends on a thin and vulnerable string of tankers to transport the narcotic fuel to which its wheels of industry are addicted, and without which the West would most surely suffer an intense and painful withdrawal. Not only does this excessive dependence of the industrialized world upon the oil of the Persian Gulf pose severe economic,¹ political and foreign policy problems,² but it also creates vehement con-

1. The economic impact of the increased cost of OPEC oil upon the world economy has been severe. The United States, with less than six percent of the world's population, consumes thirty percent of its energy; the nation's balance-of-payments deficit reached \$14 billion in 1977, and exceeded \$13.5 billion in 1978. The price surge of 1979 that placed the OPEC per-barrel price at \$30 will raise the U.S. cost of oil by an additional \$18 billion. Fuel import costs reached exorbitant proportions in the 1980's, which reversed prior favorable trends in our balance of payments, at a time when the U.S. embargo on sales to the Soviet Union and Iran diminished export earnings. *United States: The Long Awaited Slump Will Finally Hit*, BUS. WEEK, Feb. 4, 1980, at 57, 60. See Dempsey, *Book Review*, 9 GA. J. INT'L & COMP L. 464, 464 (1979). The Organization for Economic Cooperation and Development (OECD) predicts that the recent 60% increase in the price of imported oil will insure 12 months of economic stagnation for the U.S. and a correspondingly declining growth in other western nations. This will, in turn, lead to increased inflation, increased unemployment, and severe balance-of-payments problems. Achnacarry, *Breaking the Saudi Connection*, THE NATION, Oct. 13, 1979, at 327-28. The medium term problem facing the world energy system is the avoidance of financial crises. Major new shocks to the system such as sharp oil price increases or prolonged economic recession may be beyond the capacity of the current world economic system to absorb. J. SAWHILL, K. OSHIMA, & M. MAULL, *ENERGY: MANAGING THE TRANSITION* 67, 68 (1978) [hereinafter cited as SAWHILL, OSHIMA & MAULL].

2. These are dangerous times. With the recent invasion and occupation of Afghanistan by Soviet troops, the overthrow of the Shah by a vehemently anti-Western regime, the insecurity faced by Saudi Arabia, the general political instability which pervades Southwest Asia, extraordinary increases in the price of OPEC crude, and the inability or unwillingness of the Israeli government to satisfactorily resolve the Palestinian issue, the Middle East is the tinderbox of the world. It is the region of the planet where the potential for direct superpower confrontation (and the frightening thermonuclear possibilities arising therefrom) is greatest. See generally, Adelman, *International Oil*, 18 NAT. RESOURCES J. 725 (1978); Conant & Kratzer, *International Dimensions of Energy*, 27 AM. U.L. REV. 559 (1978); McKelvey, *World Energy: The Resource Picture*, 10 CASE W. RES. J. INT'L L. 597 (1978); McKie, *Oil Imports: Is Any Policy Possible?*, 18 NAT. RESOURCES J. 731 (1978); Mead, *Political-Economic Problems of Energy — A Synthesis*, 18 NAT. RESOURCES J. 703 (1978); M. TANZER, *THE POLITICAL ECONOMY OF INTERNATIONAL OIL AND THE UNDERDEVEL-*

cerns over the tragic consequences which have, and will continue to, adversely affect a fragile marine and coastal environment.

It is this environment which produces most of the oxygen and much of the food the living beasts of the planet consume. Surely, the loss of either would be even more devastating to *Homo sapiens* than the loss of his precious fuel. Hence, it would seem that man would seek to ensure that the massive quantities of fuel to which he has grown accustomed would be transported in a manner which is least destructive of his environment.

Garrett Hardin has succinctly described the environmental problems associated with what may be the inherent tendency of man to waste that over which he may assume only collective (as opposed to individual) ownership as the "tragedy of the commons":

The 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.³

Because our oceans cannot be fenced and hence made private property, Hardin argues that "tragedy of the commons as a cesspool must be prevented by different means, by coercive laws or taxing devices that make it cheaper for the polluter to treat his pollutants than to discharge them untreated."⁴ This article will examine these coercive laws and taxing devices to discern whether they can prevent the possibility of having rational man make cesspools of our oceans. Specifically, it is the complex legal labyrinth which has evolved to govern the transportation of oil by sea and seeks thereby to protect our marine and coastal environment, to which this article is addressed. The legal regimes which have exercised jurisdiction over such pollution are three — flag states, coastal states, and the international community — each of which has a separate, but nevertheless legitimate, interest in regulation.

The dramatic growth in the use of flags of convenience by the maritime industry since World War II⁵ has become an issue of international concern, one for which the application of customary rules of international law may be unsatisfactory. Essentially, a flag of convenience constitutes

OPED COUNTRIES (1969); M. WILLRICH, *ENERGY AND WORLD POLITICS* (1975); R. KEOHANE & J. NYE, *POWER AND INDEPENDENCE* 24-29 (1977); Dempsey, *Economic Agression & Self-Defense in International Law: The Arab Oil Weapon and Alternative American Responses Thereto*, 9 CASE W. RES. J. INT'L L. 253 (1977); Weaver, *Our Energy Predicament*, NATIONAL GEOGRAPHIC, ENERGY 2 (Feb. 1981).

3. Hardin, *The Tragedy of the Commons*, in G. HARDIN & J. BADEN, *MANAGING THE COMMONS* 22 (1977).

4. *Id.*

5. See UNCTAD, Committee on Shipping, *Economic Consequences of the Existence or Lack of a Genuine Link Between Vessel and Flag of Registry*, 23, 26, U.N. Doc. TD/B/C.4/168 (1977) [hereinafter cited as UNCTAD Report].

"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."⁶ The nations presently noted for granting flags of convenience are principally those of the third world, with Panama, Liberia, and the Honduras being among the most notorious.

Fleets of ships bearing these flags are characterized by their poor condition,⁷ inadequately trained crew, and frequent collisions, which have too often resulted in disastrous oil spills, among the most significant of which have been the *Torrey Canyon*,⁸ the *Argo Merchant*,⁹ and the *Amoco Cadiz*.¹⁰ It is in this framework that the legal dilemma has arisen.

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. The abuse of this established regime of international law by flag of convenience ships, notably in the area of pollution of the sea by oil and other hazardous substances, has given rise to a pressing need to regulate this hitherto unrestricted use of the sea in order to protect the international environment from irreparable injury. Such regulation has been attempted both by international organizations and by coastal states. Nevertheless, their success in preserving the marine environment has repeatedly been

6. B. BOCZEK, *FLAGS OF CONVENIENCE* 2 (1962). As the term suggests, the conditions of registration are, above all, convenient for both the vessel owner and the registering state. However, flags granted under these favorable conditions have gone by other terms as well, such as "flags of necessity," "tax-free flags," "flags of attraction," etc. For a survey of the various terms and the reasons for them, see *id.* at 4-6.

7. It is interesting to note that during the early 1960's, when the topic of flags of convenience had attracted the attention of several publicists, a large number of flag of convenience fleets boasted new vessels that were in better condition than the ships of established national fleets. However, in the intervening years, these ships have become rusting hulks, but are still sailing the seas. Panama is even noted for accepting for registry ships that are unacceptably old to other registering countries. Consequently, one advantage that at one time could be ascribed to flag of convenience ships has become, in the course of twenty years, a major disadvantage. See UNCTAD Report, *supra* note 5, at 27-31.

8. Juda, *IMCO and the Regulation of Ocean Pollution from Ships*, 26 INT'L & COMP. L.Q. 558 (1977); Cusine, *Liability for Oil Pollution Under the Merchant Shipping (Oil Pollution) Act 1971*, 10 J. MAR. L. & COMM. 105, 106-07 (1978); Nanda, *The "Torrey Canyon" Disaster: Some Legal Aspects*, 44 DEN. L.J. 400 (1967).

9. Herman, *Flags of Convenience — New Dimensions to an Old Problem*, 24 MCGILL L.J. 1, 2 (1978).

10. See *In re Oil Spill by "Amoco Cadiz"*, 471 F. Supp. 473 (J.D.M.D.L. 1979); Inter-Governmental Maritime Consultative Organization (IMCO) Maritime Safety Committee, 38th Sess., Doc. No. msc. xxxviii/21/Add. 1 (1978), reprinted in *Oil Tanker Pollution: Hearings Before the Subcomm. on Government Activities and Transportation of the House Comm. on Government Operations*, 95th Cong., 2d Sess. 268-70 (1978); For a brief account of other major tanker spills, see OFFICE OF TECHNOLOGY ASSESSMENT, *OIL TRANSPORTATION BY TANKERS: AN ANALYSIS OF MARINE POLLUTION AND SAFETY MEASURES* 32-37 (1975) [hereinafter cited as *OIL POLLUTION BY TANKERS*].

hampered by the traditional legal regime which has afforded broad protection to the activities of ships flying flags of convenience.

How does one balance the rights and interests of flag states to insure freedom of commerce on the high seas, and to defend their customary international legal rights of exclusive sovereignty over their vessels, against the rights and interests of coastal states to protect the commercial well-being of their tourism and fishing industries, as well as their aesthetic and environmental interests in being free of pollution? Should there be a genuine link (*i.e.*, an adequate legal relationship) between the owner of the vessel and the state of registry? Should coastal states be permitted to require that vessels serving their ports and traversing their territorial waters comply with minimum standards of construction and safety? Or should such obligations, if imposed at all, be the sole and exclusive responsibility of the world community acting under mutually agreed principles embodied in multilateral conventions?

This article will examine the conflicting claims that have been presented, to determine whether this conflict can be resolved within the existing international legal framework, and to evaluate the methods that have been adopted by the international community and coastal states to deal with the serious environmental problems presented by flag of convenience ships. The principal focus will be on the U.S. commercial interests in flags of convenience, balanced against the need to protect the nation's coastal environment. The United States, perhaps more than any other country, is in an anomalous position with regard to the conflict at issue. A large portion of the U.S. tanker fleet is registered under flags of convenience,¹¹ particularly Liberian and Panamanian.¹² Such registry is sanctioned by U.S. law¹³ and mandated by U.S. economic conditions.¹⁴ An important purpose of registering under a flag of convenience is to avoid U.S. regulation of safety, taxation, construction, and employment obligations. However, recently promulgated environmental laws have been designed to regulate the standards and activities of all vessels entering U.S. ports, including those flying flags of convenience. Paradoxically, having sanctioned the transfer of many United States-owned vessels to flag of convenience registry, thereby losing direct control over the activities of those ships, the United States is now attempting to invoke regulation indirectly as a coastal state which it cannot impose directly as a flag state.

11. See UNCTAD Report, *supra* note 5, at 33. See also *Oil Pollution Liability: Hearings on H.R.776, H.R.1827, H.R.1900, H.R.3711, and H.R.3926 Before the Subcomm. on Coast Guard and Navigation of the House Comm. on Merchant Marine and Fisheries*, 95th Cong., 1st Sess. 83-84 (1977) (statement of O.R. Menton).

12. *OECD Study on Flags of Convenience*, 4 J. MAR. L. & COMM. 231, 234 (1973).

13. Shipping Act of 1916, § § 9, 37, 41; 39 Stat. 730, as amended, 46 U.S.C. § § 808, 835, 839 (1976). For an explanation of the U.S. vessel transfer policy under the Maritime Administration, see B. Boczek, *supra* note 6, at 33-36.

14. See *infra*, notes 62, 63, 66-83, and accompanying text.

II. ENVIRONMENTAL DAMAGE AT SEA — OUR OCEANS IN DIRE STRAITS

Every year, one and one-half billion gallons of oil are spilled into the oceans. While routine deballasting and cleaning operations are responsible for the bulk of the oil which has been lost or dumped at sea, it is the major spills which have become the focus of world press and public attention.¹⁵

15. STAFF OF HOUSE COMM. ON PUBLIC WORKS AND TRANSPORTATION, COMPENSATION FOR VICTIMS OF WATER POLLUTION, 96th Cong., 1st Sess. 20 (1977). It is estimated that 80 to 85% of oil spillage is caused by intentional dumping. *Id.* See Roady, *Remedies in Admiralty for Oil Pollution*, 5 FLA. ST. U.L. REV. 361, 362 (1977); and Bergman, *No Fault Liability for Oil Pollution Damage*, 5 J. MAR. L. & COM. 1, 7 (1973). For example:

NEW ORLEANS (UPI) - Crude oil oozed into the Mississippi River Thursday from a 100-foot slit in the side of a Liberian tanker that collided with two barges and erupted in flames on the foggy waterway.

The vessel was partially filled with 2.4 million gallons of oil, and 30,000 gallons spilled out.

Flames up to 300 feet high rose from the tanker, which was moving upriver several miles above the New Orleans French Quarter when the collision occurred. "The river was on fire for about a mile," said Arman Alleman, a volunteer fireman in Marrero, La., a community across the river from New Orleans. "Almost the entire river was on fire."

UPI, *Crippled Tanker Leaks Crude*, ROCKY MTN. NEWS Dec. 21, 1979, at 45, col. 1. The above excerpts are taken from the account of a recent collision on the Mississippi River involving an oil tanker. The inferno which resulted, however, is small in comparison to the cataclysm which could potentially erupt from a collision with a fully loaded Liquefied Natural Gas (LNG) tanker.

If spilled on water in a large-scale accident, it is unlikely the water would freeze. Instead, the water would continue to warm the floating LNG, vaporizing it and forming a spreading cloud. Researchers currently disagree on the shape, size, movement, and composition of the vapor cloud and the factors which will affect it. It is believed that the concentration of LNG vapor within the cloud is not homogeneous. At the edge of the cloud, where the greatest mixing with ambient air occurs, the concentration of gas is lowest. At the core of the cloud, the concentration is highest. Where the cloud falls within the flammable limits of 5 to 15 percent, the cloud may be ignited and burn back toward the source of the spill. It is generally agreed that, if the vapor from a large LNG spill ignites, it would be beyond the capability of existing firefighting methods to extinguish it. Therefore, the key to reducing the hazard of an LNG fire is a strong prevention program.

OFFICE OF TECHNOLOGY ASSESSMENT, TRANSPORTATION OF LIQUIFIED NATURAL GAS 8 (1977). This article continues to describe the only major incident to date involving an LNG spill:

That accident occurred at the first LNG installation in 1944. At that time, a storage tank owned by East Ohio Gas Company in Cleveland ruptured, spilling 6,200 cubic meters of LNG into adjacent streets and sewers. The liquid evaporated, the gas ignited and where confined, exploded. The disaster remains the most serious LNG accident anywhere in the world. It resulted in 128 deaths, 300 injuries, and approximately \$7 million in property damage.

Id. at 8-9. LNG tankers such as those currently under construction by General Dynamics have a capacity of 125,000 cubic meters. *Id.* at 15. Speculation as to the potential explosive force of this large a quantity of LNG lies beyond the scope of this article; however it is clearly awesome.

A. *The Cost of Oil Pollution — Major Oil Spills*

The alarming number of collisions and other accidents involving tanker ships has become, in recent years, a major topic of concern. The potential for loss of life and property damage, as well as pollution damage to the environment is clearly tremendous. This potential is magnified incalculably where a mishap occurs within a crowded harbor near a large metropolitan area.

Major oil spills that have attracted substantial public attention date back to the *Torrey Canyon* disaster of 1967 in which 117,000 tons of oil were spilled into the English Channel, at a clean-up cost of some \$5 million.¹⁶ Such disasters continued throughout the past decade. Among these were: (a) the Santa Barbara Channel incident of 1969 (oil well blowout) in which 13,888 tons of oil were spilled into the waters along the California coast, at a cost of \$8.5 million;¹⁷ (b) the 1974 *Metula* sinking in the Strait of Magellan in which 50,000 tons of oil were lost;¹⁸ (c) the 1976 Chesapeake Bay spill in which 256,000 gallons were lost in Virginia inland waters; (d) the *Argo Merchant* spill off Nantucket, Massachusetts, in which 7.2 million gallons of oil were lost, costing \$5.2 million to clean up;¹⁹ and (e) the sinking of the supertanker *Amoco Cadiz*, which dumped 69 million gallons of oil off the coast of Brittany in 1978.²⁰ The last was

16. Gundlach, *Oil Tanker Disasters* 19 ENVIRONMENT 18 (No. 9 1977). Environmental damage to the coasts of Cornwall and Brittany was extensive. It is suspected, however, that the application of untested detergents contributed significantly to the damage.

17. *Id.* The oiling of waterbirds received the greatest attention in the press. Overall, however, the damage was not as great as initially expected. The spill occurred in the winter when many organisms were dormant or at low population levels.

18. *Id.* at 19. The spill covered 1,000 sq. miles. No cleanup was attempted since the spill occurred in a remote area.

19. *Compensation for Victims of Water Pollution*, note 15 *supra*. The sinking of the *Argo Merchant* caused the largest spill in U.S. history. The 30,000 ton tanker had a long history of structural problems. She sank 29 miles from shore in international waters.

20. Other major oil disasters at sea have included the following:

(a) On September 16, 1969 in Buzzards Bay, Massachusetts, a "small oil spill" discharged 200,000 gallons of oil into the bay and its surrounding marshes. Studies of the spill showed an expansion from five hundred acres originally affected to five thousand offshore acres together with five hundred acres of marsh;

(b) In 1971 the *Wafra* lost 26,000 tons of oil off the coast of South Africa in the Stilbaai oil spill, affecting at least nine miles of beaches;

(c) Two tankers collided outside of San Francisco Bay resulting in a loss of 1,000,000 gallons of oil; this spill affected beaches and wildlife sanctuaries for fifty miles;

(d) The *Arrow* lost 4.8 million gallons of oil off the coast of Nova Scotia in 1973, which spread over one-hundred fifty miles of shoreline;

(e) The Mizushima oil spill in 1974 was the result of a rupture of a refinery storage tank off the coast of Japan; the amount of oil spilled in this incident was approximately 43,000 tons;

(f) 40,000 tons of oil were spilled in the Straits of Magellan in 1974 in the *Metula* oil spill — the spill affected over 1,000 square miles;

(g) One year later, near Oporto, Portugal, the *Jakob Maersk* spill washed 15,000 tons of oil onto recreational beaches;

(h) One-hundred thirty miles of coastline were affected in the May 1976 wreck of the

considered to be by far the worst shipwreck in history, the cost for cleanup is estimated to have been \$30 million.²¹ There, oil mixed with water to form a thick chocolate-colored emulsion called "mousse." This mousse-covered sea slopped ashore fouling beaches for 130 miles, besmearing fisheries and seaweed harvests. It was estimated that there was enough mousse on the Breton coast to fill 17,700 railroad cars. Only fifteen to twenty percent of the 250,000 tons of crude oil spilled was recovered,²² the rest remains in the ocean.

It is understandably difficult to comprehend the magnitude of a spill

Uriquiola in La Coruna Harbor, Spain. 100,000 tons of oil were lost;

(i) In April of 1977 the Bravo 14 Platform, southeast of Norway, lost 28,000 tons of oil and resulted in a slick covering an area seventy miles by forty miles;

(j) Later that year, in December, the *Esso Bernicia* incident off the coast of the Shetland Islands affected ten kilometers of coastline;

(k) In November 1979 the *Berma Agate* excreted oil into the Gulf of Mexico, which oil formed a slick over 10 kilometers long;

(l) One month later the *Soe Alaska* lost 100,000 gallons of oil affecting 1200 kilometers of shoreline;

(m) In March 1980 the *Tanio* lost oil in the Brittany Channel, resulting in a 100 mile long slick; and

(n) At the end of the same month, on March 24, 1980, the Ixtoc I Project, offshore in Campeche Bay, lost 140 million gallons, 28.5% of which formed a slick along the Texas coast.

See Wertebaker, *A Reporter at Large: A Small Spill*, NEW YORKER, Nov. 26, 1973, at 68. The incidents referred to in paragraphs (j) through (n) are described in the April 1979 to the May 1980 issues of *Marine Pollution Bulletin*. See 10 MARINE POLLUTION BULL. (No. 4, 1979)(News Section) to 11 MARINE POLLUTION BULL. (No. 5, 1980) (News Section).

21. Keichel, *The Admiralty Case of the Century* 99 FORTUNE, Apr. 23, 1979, at 86. Thirty million dollars is the limit of Intergovernmental Maritime Consultative Organization's clean-up liability.

Obviously, as another result of the spills, extensive costs are incurred for cleanup and retribution. The actual costs have ranged from the over \$0.5 million spent in the Buzzards Bay clean-up to the \$133 million spent for control and cleanup in the more recent Ixtoc I spill. Wertebaker, *supra* note 20, at 53. Editorial, *Ixtoc I Stopped*, MARINE POLLUTION BULL. 115 (No. 5, 1980). Subsequent to the Santa Barbara Spill, a judge fined each oil company \$500.00 in criminal penalties, when \$812,000 in fines could have been assessed pursuant to state statutes. In that same incident, \$6 million was awarded in civil suits and \$10.5 million was spent to clean beaches. The actual clean-up costs expended for workers, detergents and equipment, as shown above, are extensive, but almost always ascertainable. At the other end of the spectrum, however, are those indeterminable costs. What is the cost of a limpet, a cormorant, a sea otter? Efforts have been made to price the plant and animal life, but the ascertainment of such costs is administratively not feasible. See Editorial, *What Price Pollution?* 26 BIOSCIENCE 603 (1976). Cleanup of the Ixtoc I oil spill (the largest oil spill in history) which spewed 3.1 million gallons of oil into the Gulf of Mexico cost \$8 million. *Counting Costs of an Oil Spill*, NEWSWEEK, Aug. 4, 1980, at 8. Bermuda spends \$100,000 a year sifting the sands of its beaches to rid them of tar balls, the end product of frequent tanker flushing. Roady, *supra* note 15, at 362.

22. Keichel, note 21 *supra*. Three auk species, guillemot, razorbill, and puffin were devastated, declining from 3,000 breeding pairs to 500 in the *Torrey Canyon* disaster. The recent spill of the *Amoco Cadiz* probably means the end of the auk populations. See Bourne, *Amoco Cadiz Seems Likely To Exterminate the French Auks*, 9 MARINE POLLUTION BULL. 145 (No. 5, 1978).

of 50,000 to 200,000 tons of oil. Eldon Greenberg of the Center for Law and Social Policy, testifying before a House Subcommittee of the Committee on Government Operations, stated that a spill in South America of over 50,000 tons covered seventy-five miles of coastline with crude oil one to four inches deep.²³

B. Massive Destruction of Wildlife — "Death to All Dumb Animals" is the Insane Decree of Man

As can be discerned from these statistics, the spills over the past fifteen years have increased in frequency and magnitude, damaging a substantial area of coastline. What has not yet been adequately explored, however, is the extensive biological injury suffered as a result of these disasters. Birds have been killed in great numbers due to suffocation and poisoning,²⁴ and have also suffered serious long-term damage due to delayed toxic effects on the hatchability of eggs and chicks.²⁵ The *Torrey Canyon* disaster in 1967 resulted in the loss of more than 25,000 seabirds, most of which were killed by the toxic detergents used to break down the slick.²⁶ In the Santa Barbara blowout, at least 3,600 birds were killed. Likewise, the *Metula* spill caused the death of 3,000 to 4,000 birds.²⁷ The oil in the *Wafra* incident was particularly lethal; "tens of thousands" of Jackass Penguins on Dyer Island were drowned and poisoned.²⁸ More fatalities were reported in the San Francisco Bay Spill where ninety-four percent of the 4,629 cormorants, grebes, ducks, and coots recovered and treated were lost. A final estimate of the bird population killed in that incident was 20,000.²⁹ Another avian disaster made itself apparent in the *Esso Bernicia* incident when 3,533 corpses of forty-eight species of birds were found.³⁰ Oil spillage caused the death of a quarter of a million auks in a single Newfoundland nesting colony.³¹ Studies have shown that the deaths of the birds were the result of oil coating their feathers, making them less buoyant and, therefore, susceptible to drowning. Birds were also poisoned when the oil was ingested or aspirated as they preened or fed upon other affected animals.

The short-term effects may include the unpleasant smell of ship's

23. *Oil Spill Contingency Plan; Hearings Before the Subcomm. on Environment, Energy, and Natural Resources of the House Comm. on Government Operations*, 95th Cong., 1st Sess. 5-7 (1977) (Statement of Eldon Greenberg) [hereinafter cited as *Contingency Plan Hearings*].

24. Milne, *The Last Survivors*, 5 INT'L WILDLIFE 12 (No. 5, 1975).

25. Grau, Roudybush, Dobbs & Wathen, *Altered Yolk Structure and Reduced Hatchability of Eggs from Birds Fed Single Doses of Petroleum Oils*, 195 SCIENCE 779 (1974); Miller, Peakall & Kinter, *Ingestion of Crude Oil: Sublethal Effects in Herring Gull Chicks*, 199 SCIENCE 315 (1978).

26. J. SMITH, *TORREY CANYON: POLLUTION AND MARINE LIFE* (1968).

27. J. BAKER, *AN OIL SPILL ON THE STRAIGHTS OF MAGELLAN, MARINE ECOLOGY AND OIL POLLUTION* (1976).

28. Milne, *supra* note 24, at 12.

29. Watkins, *The Day the Birds Wept*, 78 AUDUBON 21 (No. 1, 1976).

30. Richardson, *Esso Bernicia Incident*, 10 MARINE POLLUTION BULL. 97 (No. 4, 1979).

31. Bergman, *supra* note 15, at 2.

garbage and dead fish on the beaches, for many sea birds are scavengers. Without them, the possibility of disease near our oceans is likely to increase.³² The long-term effects, as noted above, are demonstrated by decreased hatchability of the eggs produced by oil-affected birds, and high chick mortality rates.

Floundering in the same sinking biological vessel are algae, plankton, shellfish, fish, and large mammals. The *Amoco Cadiz* accident alone temporarily destroyed over 2,000 acres of oyster beds, which constituted one-third of France's commercial seafood market.³³ Sixteen days after the same spill the bodies of dead urchins littered one and one-half miles of beach.³⁴ The Santa Barbara spill substantially decreased the surrounding phytoplankton biomass, and large mammals and their young, including seals, sea elephants, and one porpoise, were found dead, presumably from oil poisoning. Also killed in this incident were shore plants and animals which were smothered by the oozing oil.³⁵

The devastating effects of oil spillage on the marine environment differ with various factors. Erich Gundlach, together with a team of researchers for the Coastal Research Division Oil Spill Assessment Team (University of South Carolina), determined that the extent of damage caused by a spill depends upon its proximity to coastal areas, time of year, weather, tidal conditions, wave activity, and toxicity of the spilled crude oil. Vulnerability to extensive damage increases in coastal areas where biological productivity is high, particularly in those areas where wave action is diminished.³⁶ Such findings are well substantiated by the tragic environmental damage which resulted from the sinking of the *Metula* in the Strait of Magellan and the sinking of a barge carrying Bunker C oil in Chesapeake Bay. Victims of the Chilean episode included mussel beds, marsh life, fish, and approximately 4,000 birds. The spilled crude oil solidified in tidal flats and marsh areas into an asphalt-like strip fifty feet wide along the rim of the flats. The effects of the disaster are expected to remain visible for at least ten years.³⁷ The Chesapeake Bay disaster took even more victims — 30,000 to 50,000 birds. In addition, the spill resulted in the destruction of many oyster beds.³⁸

32. *Id.*

33. Grove, *Black Day for Brittany*, NAT'L GEOG., July, 1978, at 133.

34. Editorial, *Amoco Cadiz: A Lasting Disaster*, 144 SCI. NEWS 85 (No. 6, 1978).

35. Holme, *Effects of Torrey Canyon Pollution on Marine Life*, OIL ON THE SEA 25 (1969).

36. Gundlach, *supra* note 16, at 21. In order of increasing vulnerability, the environments by classification are (1) exposed, steeply dipping or cliffed rocky shores, (2) eroding wavecut platforms, (3) fine sand beaches, (4) coarse sand beaches, (5) exposed tidal flats, (6) mixed sand and gravel beaches, (7) gravel beaches, (8) sheltered rocky coasts, (9) sheltered tidal flats, and (10) salt marshes and mangroves.

37. *Id.* at 19. Vegetation in the area, of course, has been totally devastated.

38. J. REIGER, *JUST ANOTHER OIL SPILL* 145 (1977). James Hill, in describing the incident stated, "It was awful. As fast as the children brought the ducks, others would crawl up on the beach to die. Some were so covered with gunk you couldn't tell the species."

Perhaps the most disturbing description of wildlife devastation was written by William Wertenbaker with respect to the spill of 700 tons of fuel oil into Buzzards Bay, off the Massachusetts coast. Shortly after the incident, piles of dead lobsters were washed upon the shore. "In scientific generalities, the marine animal population of the area, in the course of the next week or so, declined from about 200,000 animals per square metre to about two animals per square metre."³⁹ In one dredge, ninety-three percent of all organisms were either dead or dying.⁴⁰ One of the marshes affected by the spill remained incapable of sustaining life for at least two years subsequent thereto. The shellfish industry was closed twice due to the oily taste of the fish, and a harvest which would have resulted in a profit of \$150,000 was foreclosed. The fishing industry also suffered a severe blow in the *Uriquiola* incident when seventy percent of the edible cockle were killed.⁴¹ A study has shown that polar bears are also adversely affected by oil. Two bears died from kidney and liver damage as a result of licking oil from their coats and paws.⁴² These frightening statistics demonstrate the biological devastation brought about by oil. "Interference at an extremely low concentration level may have a disastrous effect on the survival of many marine species and on any other species to which it is tied by the marine food chain."⁴³

C. *The Long-Term Impact of Oil Spillage and Dumping — The Potential Destruction of the Planet*

Although the full environmental effects of tanker pollution are not yet known, certain effects are obvious: the tarring of beaches, the endangering of seabird species, and the modification of benthic communities, to name a few. In correspondence with the Senate Committee on Commerce, the Cousteau Society has stated that the long-range effects of such spills may be particularly devastating, warning that such spills affect the reproductive capacity of various species of marine life and also interfere with the ocean food chain link by killing important food sources of otherwise unaffected marine life.⁴⁴

Such warnings are now being substantiated by studies undertaken by the scientific community. Most recently, in a study of the effects resulting from the *Argo Merchant* oil spill, scientists found the killing of sand lance larvae, an important food source for fish, to have affected the en-

39. Wertenbaker, *supra* note 20, at 49.

40. Bergman, *supra* note 15, at 3.

41. Gundlach, *The Black Tide of La Coruna*, 10 OCEANS 56 (1977). See Roady, *supra* note 15, at 363.

42. Editorial, *Polar Bear Deaths from Oil*, 11 MARINE POLLUTION BULL. 117 (No. 5, 1980).

43. Blumer, *Oil Pollution of the Ocean*, OIL ON THE SEA 11 (1969).

44. *Recent Tanker Accidents: Hearings Before the Senate Comm. on Commerce*, 95th Cong. 1st Sess. 235 (1977) (letter to President-Elect Carter from the Cousteau Society and the Union of Concerned Scientists). The letter, in discussing short range effects of oil spills, noted that oil uptake by fish can make them carcinogenic to man.

tire ecosystem of the area.⁴⁵ Other disturbing reports have indicated that oil spillage has caused decreased reproductivity in marine life,⁴⁶ decreased hatchability of eggs of various seabirds,⁴⁷ has inflicted physiological and behavioral damage on affected animals,⁴⁸ and has had long-lasting effects on phytoplankton and zooplankton survival.⁴⁹ Taking into consideration the extensive short-term damage which has occurred and the forecasted long-term damage yet to be manifested, it has been predicted that the oceans will soon become biological deserts.⁵⁰ That forecast is particularly disturbing in that the food chain, of which man is a part, has its significant beginnings in the oceans. "More is at stake here than birds or fish, of course; rents are being made in the web of life upon which man depends, and of which he is a part."⁵¹

One commentator has summarized the impact of continued oil pollution as follows:

Oil . . . coats the seaweed causing it to be easily torn free by wave action, resulting in beach erosion. At the same time, some oil begins to biodegrade, reducing the life supporting dissolved oxygen in the water available to living organisms The slick itself interferes with phytoplankton photosynthesis, the food source for much of the world's protein and a source of oxygen for the atmosphere. Interference with water evaporation may cause reduced water vapor in the air with a proportionate decrease in rainfall.

In addition to genetic changes and deformities, observers have reported increasing cancerous lesions of fish in areas of high oil pollution, raising the specter that oil pollution may induce cancer in man.⁵²

Jacques Piccard has stated: "If nothing is done, all the oceans will be dead before the end of the century."⁵³

45. *Contingency Plan Hearings*, *supra* note 23, at 76. Among the wildlife affected by the *Argo Merchant* spill included: blackback and yellowtail flounder and shellfish (adverse effects on respiratory systems), cod and pollack embryos (increased mortality rate), and plankton (contaminated with petroleum hydrocarbon).

46. *Id.*

47. *Effects of Oil on Birds*, 32 CALIFORNIA AGRICULTURE 16 (1978); *see also* Grau, *et al.*, *supra* note 25, at 779.

48. *Aftermath of an Oil Spill: A Black Seven Years*, 112 SCI. NEWS 84 No. 6, (1979). This seven-year study was conducted following a No. 2 fuel oil spill into Buzzards Bay, Massachusetts in 1969. Populations have not recovered to pre-spill levels and significant behavioral aberrations are common in the survivors.

49. James, *Xenobiotic Metabolism in Marine Species Exposed to Hydrocarbons*, ENERGY/ENVIRONMENT 11 NATIONAL CONFERENCE ON THE INTERAGENCY RESEARCH & DEVELOPMENT PROGRAM, 2d EPA RPT. No. 600/9-77-012 (1977).

50. *Oil Is Pouring on Troubled Waters*, TIME, Jan. 10, 1977, at 47.

51. Editorial, *Pity the Birds*, NATION, Feb. 8, 1971, at 166.

52. Anderson, *National and International Efforts to Prevent Traumatic Vessel Source Oil Pollution*, 30 U. MIAMI L. REV. 985, 992-93 (1976) [citations omitted].

53. Piccard, *Dying Oceans, Poisoned Seas*, TIME, Nov. 8, 1971, at 74.

D. Oil Pollution — Its Cause and Cure

As has been indicated, there are essentially two sources of oil pollution from ships: (1) pollution from routine vessel operations, such as tank cleaning, deballasting, and periodic discharge;⁵⁴ and (2) tanker accidents, such as collisions or running aground.⁵⁵ Of the two, by far the greatest amount of pollution is caused by routine operations.⁵⁶

In order to deal with the problem, there must be a sophisticated and effective legal system governing the high seas, ports, territorial waters and the contiguous zone. The objectives of this regime would be fourfold:

1. To prevent or minimize intentional discharges of oil from ships;
2. To prevent accidents which result in the discharge of oil into the sea;
3. To establish procedures for dealing with pollution or the threat of pollution from accidents; and
4. To establish procedures for assigning liability for damage arising from pollution, and ensuring compensation to victims of the damage.⁵⁷

The key to the prevention of oil discharge either from accidents or routine operations lies in establishing minimum standards for construction and maintenance of vessels, training and licensing of crews, and information and navigational controls.⁵⁸ A necessary corollary to establishing these standards is the creation of a legal regime that will effectively enforce them. The types of modifications to vessel structure and operation that reduce pollution and improve safety⁵⁹ include: (a) fitting the ship with a double bottom and a double hull; (b) constructing segregated ballast tanks apart from cargo tanks; (c) implementing an inert gas system to reduce the danger of explosion; (d) using a load-on-top method of

54. Approximately 80-85% of all oil spillage is caused by intentional dumping. See note 15 *supra*.

55. Of the five to ten million tons of oil floating upon the seas in 1971, an estimated one million tons were spilled as a result of tanker collisions and groundings. One third of these accidents were the product of structural defects in the vessels involved. Carter, *Amoco Cadiz Incident Points Up the Elusive Goal of Tanker Safety*, 200 SCIENCE 515 (1978).

Moreover, concern over increased tanker traffic and the potential for an increasing number of catastrophic tanker accidents is far from unfounded. From the 1950's until 1965, the number of tankers ranging in size from 50,000 deadweight tons (dwt) to 199,999 dwt increased from 1 to 471. By the early 1970's, the number of tankers measuring more than 200,000 dwt registered at 131. Today tankers twice the size of the *Amoco Cadiz* weighing 250,000 dwt are in use, and the number promises to increase as the Western world's dependency on oil from the Middle East climbs at a disturbing rate. Gundlach, *supra* note 16, at 18. The growth in both the use and size of supertankers began after the closing of the Suez Canal during the Arab-Israeli conflict of 1967. See Anderson, *supra* note 52, at 998.

56. OIL TRANSPORTATION BY TANKERS, *supra* note 10, at 27. As of 1975, approximately 1,000,000 tons of oil per year are dumped in standard operations, while 200,000 tons are spilled through casualties. *Id.* at 1.

57. Mensah, *International Environment Law: International Conventions Concerning Oil Pollution at Sea*, 8 CASE W. RES. J. INT'L L. 110, 112 (1976).

58. OIL TRANSPORTATION BY TANKERS, *supra* note 10, at 1-7.

59. For further elaboration and analysis of these methods of pollution prevention, see *id.* at 38-57.

discharging ballast; and (e) limiting tanker size.

A large number of serious accidents resulting in disastrous spills are attributable to inadequately trained crews. This problem may be resolved by establishing minimum skill and training requirements for licensing of tanker crews.⁶⁰ In addition, adequate information and control systems should be required to facilitate the operation of a massive tanker in an unfamiliar port, or in unusual weather conditions. These systems may be classified in the following categories: navigational aid, communications, information, control, vessel traffic, and collision avoidance.⁶¹ In the event of the failure or nonimplementation of these preventive measures, there must be a mechanism for cleaning up pollution when it does occur, and allocating liability for the resulting damage. With these objectives in mind, let us now examine the existing legal framework to discern whether there is any promise for alleviation of the enormous tragedy described in this section.

III. FLAGS OF CONVENIENCE

A. *The Advantages of Registry Under a Flag of Convenience*

The advantages derived by U.S. shipowners as a result of registry under flags of convenience are numerous, and can be attributed both to the competitive conditions of the world shipping trade, and the nature of relevant United States legislation vis-à-vis that of flag of convenience states such as Liberia, Panama, and Honduras. The attributes of flag of convenience registry have been summarized as follows:

1. Transfer to a foreign flag increases the market value of the ship.
2. Transfer reduces operating costs, particularly for wages and maintenance of good working conditions, due to lower standards permissible under foreign flags.
3. Transfer makes possible operating in world trade with easy currency conversion.
4. Transfer allows the owner to avoid United States Coast Guard requirements governing the condition of the vessel.
5. The owner may effect repairs abroad at less cost than the same repairs in the United States.
6. The owner can save money by avoiding United States income tax.
7. And ultimately, as a result of increased earnings, the owner's financial ability to acquire new tonnage is improved.⁶²

All of these advantages are essentially financial in nature. By avoiding United States labor, tax, and regulatory laws through the use of flags of convenience, the cost of transporting foreign oil is dramatically

60. *Id.* at 57-63.

61. *Id.* at 63-71. See generally, Greenwald, *LNG Carrier Safety: A Guide to the System of Federal Regulation*, 9 J. MAR. L. & COM. 155 (1978).

62. *Study of Vessel Transfer Trade-in & Reserve Fleet Policies: Hearings Before the Subcomm. on the Merchant Marine of the House Comm. on Merchant Marine & Fisheries*, 85th Cong., 1st Sess. 140 (1957), reprinted in B. BOZCEK, *supra* note 6, at 29-30. See Herman, *supra* note 9, at 4-5.

decreased.⁶³

Decreased transportation expense, however, is not the only result of widespread flag of convenience registration. The recent number of oil spills involving flag of convenience tankers has led one publicist to conclude, regarding what he described as "The 'Argo Merchant' Syndrome," that, "these incidents have contributed to a general recognition of the inadequacy of present international rules that allow ancient, poorly-repaired, ill-equipped or inadequately manned and navigated vessels into ocean-borne trade service."⁶⁴ Data clearly indicate that losses and casualties of flag of convenience vessels exceed those of vessels registered in the country of ownership.⁶⁵ Hence, the need for stringent safety regulation by coastal states of foreign as well as domestic vessels is manifest.

1. *General Economic Considerations*

The costs of ship construction, maintenance, and operation in the United States are so high that a domestically registered vessel cannot compete with foreign ships without substantial government subsidy. The transportation of oil on the world market is intensely competitive, and U.S. operating costs are as much as seventy percent higher than those of foreign vessels. Hence, in the absence of government subsidization, U.S.-owned oil tankers can remain competitive only by operating under flags of convenience.⁶⁶ In addition, U.S.-registered vessels are required to employ American crews, operating under American labor standards, wages, and fringe benefits. This represents an economic disadvantage of ninety to ninety-five percent to a nonsubsidized U.S. vessel owner.⁶⁷ Under a flag of convenience, the shipowner may hire an alien crew with substantially less maritime experience at a substantially lower cost.⁶⁸ Finally, repair costs performed in the United States average almost twice what they cost abroad. Under U.S. law, a U.S.-registered vessel must have its repairs performed in the United States, or pay an additional tax for having it done abroad.⁶⁹ The result of all of these factors is "to bring the high operating costs incurred by ships registered in the United States down to a level nearer that of the general run in the countries of their foreign com-

63. *Recent Tanker Accidents: Legislation for Improved Tanker Safety: Hearings on S.182, S.568, S.715, S.898, Before the Senate Comm. on Commerce, Science, and Transportation, 95th Cong., 1st Sess. 812-14 (1977)* (Cost Appendix Tables in Statement of Lawrence C. Ford. Lawrence Ford spoke for the American Petroleum Institute). See also Wittig, *Tanker Fleets and Flags of Convenience: Advantages, Problems, and Dangers*, 14 *TEXAS INT'L L.J.* 115 (1979) for a discussion of the economic motives for flag of convenience vessel registration.

64. Herman, *supra* note 9, at 2.

65. See *Proposed Amendments to the Energy Transportation Security Act of 1977: Hearings on H.R. 1037 Before the Comm. on Merchant Marine and Fisheries, 95th Cong., 1st Sess. 294-96, 304 (1977)* (Research report of Prof. R.S. Doganis, and Dr. B.N. Metoxas).

66. See B. BOCZEK, *supra* note 6, at 27-32.

67. *Id.*

68. *Id.*

69. 19 U.S.C. § 1466 (1976).

petitors. In a sense, therefore, it is the removal of a handicap rather than the gaining of an advantage"⁷⁰

In addition to the economic advantages of operating under a flag of convenience, there are also a number of disincentives to U.S. registry. For example, in order for a vessel to obtain United States registry, it must: (a) be certified by the Bureau of Marine Inspection and Navigation and be constructed in the United States;⁷¹ (b) primarily employ an American crew;⁷² (c) have its repairs performed in the United States or face additional taxation;⁷³ and (d) be wholly owned by American citizens or a corporation chartered under American law.⁷⁴

British law is not as stringent as U.S. law in its requirements for re-

70. Quoted in B. Boczek, *supra* note 6, at 31.

71. 46 U.S.C. § 11 (1976):

Vessels built within the United States and belonging wholly to citizens thereof . . . and seagoing vessels, whether steam or sail, which have been certified by the Bureau of Marine Inspection and Navigation as safe to carry dry and perishable cargo, wherever built, which are to engage only in trade with foreign countries . . . may be registered as directed in this title. Foreign-built vessels registered pursuant to this title shall not engage in the coastwise trade

In 1946 the Bureau of Marine Inspection and Navigation was abolished, and its functions transferred to the Commandant of the Coast Guard. 46 U.S.C. § 1 (1976).

72. 46 U.S.C. § 672a:

Nationality of crews —

(a) [A]ll licensed officers and pilots of vessels of the United States shall be citizens of the United States, native born, or completely naturalized.

(b) [U]pon each departure of any such vessel from a port of the United States, 75 per centum of the crew, excluding licensed officers, shall be citizens of the United States, native-born or completely naturalized

(d) The owner, agent, or officer of any such vessel, who shall employ any person in violation of the provisions of this section, shall be subject to a penalty of \$500 for each offense.

73. 19 U.S.C. § 1466(a):

Equipment and repairs of vessels —

(a) The equipment . . . or the repair parts or materials to be used, or the expenses of the repairs made in a foreign country upon a vessel documented under the laws of the United States to engage in the foreign or coasting trade . . . shall, on the first arrival of such vessel in any port of the United States, be liable to entry and the payment of an ad valorem duty of 50 per centum on the cost thereof in such foreign country; and if the owner or master of such vessel shall willfully and knowingly neglect or fail to report, make entry, and pay duties as herein required, such vessel, with her tackle, apparel, and furniture, shall be seized and forfeited.

See also *id.* § 1466(b).

74. 46 U.S.C. § 11:

Vessels . . . being wholly owned by citizens of the United States or corporations organized and chartered under the laws of the United States, or of any State thereof, of which the president or other chief executive officer shall be citizens of the United States and no more of its directors than a minority of the number necessary to constitute a quorum shall be noncitizens, may be registered as directed in this title.

See also *id.* § 802.

gistration, in that it does not require a national crew, or construction and maintenance to be performed within the United Kingdom or the Commonwealth. The primary requirement for registration is that of British ownership⁷⁵ (which includes ownership by corporations established under the laws of any of the British dominions, although foreigners may be stockholders in such corporations).⁷⁶ As a result, British ships may be registered under the laws of Commonwealth countries (*e.g.*, Bermuda or the Bahamas),⁷⁷ and many such ships have substantial foreign ownership.

The registration laws of flag of convenience states are much more liberal, however, particularly with respect to ownership requirements. For example, under the Liberian maritime code, the requirement that the vessel be owned by a citizen or national of Liberia may be waived if "the owner of the vessel qualifies for, secures and maintains registration in the Republic of Liberia as a foreign maritime trust or corporation and either maintains at all times an operating office in the Republic or appoints a qualified business agent in the manner prescribed by law."⁷⁸ Honduras has no national ownership provision.⁷⁹ Panamanian law requires whole or partial ownership by Panamanian citizens, or foreigners domiciled in Panama with more than five years residence, or a company with its headquarters in Panama.⁸⁰ In practice, U.S. shipowners have formed Pana-

75. Merchant Shipping Act 1894, Part I, § 1:

Qualification for owning British Ship. A ship shall not be deemed to be a British ship unless owned wholly by persons of the following description (in this Act referred to as persons qualified to be owners of British ships); namely,

(a) . . . British subjects:

(b) . . .

(c) . . .

(d) Bodies corporate established under and subject to the laws of some part of Her Majesty's dominions, and having their principal place of business in those dominions:

Reprinted in 31 HALSBURY'S STATUTES OF ENGLAND 74 (3d ed. 1971) [hereinafter cited as HALSBURY'S STATUTES].

76. Now it appears to us that the British corporation is, as such, the sole owner of the ship, and a British subject within the meaning of the Act . . . notwithstanding some foreigners may individually have shares in the company, and that such individual members of the corporation are not entitled, in whole or in part, directly or indirectly, to be owners of the vessel. . . .

It seems to us that the British corporation is to all intents the legal owner of the vessel, and entitled to the registry, and that we cannot notice any disqualification of an individual member which might disable him, if owner, from registering the vessel in his own name.

R. v. Arnaud, [1846] 9 Q.B. 806, 817-18.

77. See B. BOCZEK, *supra* note 6, at 88-89.

78. LIBERIAN CODE OF LAWS, tit. 22 § 51 (1973), *reprinted in UNCTAD Report, supra* note 5, at 10.

79. Honduras, Organic Act of the National Merchant Marine No. 55 of 2 March 1943, § 2, art. 5, *reprinted in UNITED NATIONS LEGISLATIVE SERIES, LAWS CONCERNING THE NATIONALITY OF SHIPS*, 76, U.N. Doc. ST/LEG/SER.B/5 (1955).

80. Panama, Commercial Code of 22 August 1916, art. 1080, *reprinted in id.* at 129.

manian subsidiaries to meet the ownership requirements.

2. *Taxation*

An accompanying attraction to the registration laws of flag of convenience states is the absence of income or corporate taxation on maritime operations.⁸¹ A United States shipowner can couple this advantage with favorable U.S. tax laws by creating a "foreign corporation" in the flag of convenience state. Under section 883(a)(1) of the U.S. Internal Revenue Code, "[e]arnings derived from the operation of a ship or ships documented under the laws of a foreign country which grants an equivalent exemption to citizens of the United States and to corporations organized in the United States" are exempt from U.S. taxation. Although Liberia does not impose a national ownership requirement, many American companies create a foreign subsidiary in Liberia in order to take advantage of this tax provision. This provision does not entirely exempt a U.S. shipowner from paying taxes on profits, since such taxes must be paid on profits distributed as dividends to stockholders. However, it does enable the shipowner to use the law to his advantage by waiting to pay the tax at an advantageous time, or by using the profits to expand his fleet.

In addition to the absence of income and corporate taxation in flag of convenience states, the registration fees and taxes of such nations are relatively insignificant. The registration fee ranges from \$0.25 per net registered ton in Honduras, to \$1.00 and \$1.20 per ton in Panama and Liberia, respectively. The annual tax is \$.05 per ton in Honduras, and \$.10 per net ton in Liberia and Panama.⁸² While these fees are deemed moderate by American shipowners, they represent a considerable source of revenue for flag of convenience states.

3. *Safety Standards*

Finally, another traditional advantage to U.S. shipowners registered under flags of convenience is that they have not been required to meet the safety regulations imposed by the U.S. Coast Guard. It need not be assumed that tanker owners, in registering under a flag of convenience, would be motivated by the desire to operate substandard, high risk ships.⁸³ Nevertheless, they could still operate ships which, while safe, do not quite meet Coast Guard standards, and may thereby be operated more competitively. However, as will be explained in detail below, the ability of shipowners to serve U.S. ports with unsafe vessels has been significantly constricted by recently promulgated U.S. legislation.⁸⁴

81. Wittig, *supra* note 63, at 121 (1979).

82. These figures represent charges in the 1950's. Presumably they have increased somewhat in the course of twenty years. See B. BOCZEK, *supra* note 6, at 57.

83. Flag of convenience vessels are subject to international safety standards, and it is not in the best interests of owners to operate high-risk vessels. See Wittig, *supra* note 63, at 119 n.17. Furthermore, as will be seen *infra*, the new wave of domestic environmental legislation being put into effect by coastal states makes it imperative for vessels serving their ports to operate safe vessels.

84. See text accompanying notes 234-65 *infra*.

B. *United States Maritime Policy*

Among the reasons for the growth in U.S. ownership of flag of convenience fleets is the United States' vessel transfer policy. In order to prevent the U.S. Merchant Marine from becoming obsolete, the Maritime Administration allows a United States owner to transfer a U.S.-registered ship to foreign ownership and/or registry provided that the owner undertakes to replace the transferred vessel with a newly constructed vessel which satisfies the size, design, speed, and capacity criteria of the Maritime Administration. The owner of the vessel transferred to foreign flag registry must be a United States citizen or a corporation organized under the laws of either the United States, Liberia, Panama or Honduras. The registry and flag are also to be transferred to Liberia, Panama or Honduras.⁸⁵ It can easily be seen that this policy promotes a new and modern United States Merchant Marine, while unloading obsolete, substandard vessels onto flag of convenience states.

There is considerable opposition to the practice of registering vessels under flags of convenience by United States and international seamen's unions and European maritime nations. The seamen's unions are generally concerned about the lower wages paid on flag of convenience ships and the low standards for working conditions and safety that may be imposed with impunity on seamen. Labor organizations have been active opponents of flags of convenience: failing the abolition of these shipping practices, they have attempted to make favorable U.S. labor laws applicable to workers on flag of convenience ships, and to create international labor standards.⁸⁶

European maritime nations, notably the United Kingdom and Norway, are also concerned with the shipping policies of the United States which promote the use of flags of convenience.⁸⁷ Since both of these nations rely heavily on the stability and success of their merchant fleet in international commerce, they are disturbed by international practices that make deep inroads into their shipping activities, and render them incapable of effective competition without drastic change in their national laws. The practice of using flags of convenience to utmost advantage is directly attributable to the United States, and has fostered many tensions in foreign relations. On the one hand, European nations fully understand the advantages of flags of convenience and can appreciate a nation's de-

85. See B. BOCZEK, *supra* note 6, at 33-34.

86. For further analysis of the labor problems associated with flag of convenience ships and attempts to minimize them see, *inter alia*, B. BOCZEK, *supra* note 6, at 156-87; Goldie, *Recognition and Dual Nationality — A Problem of Flags of Convenience*, [1963] BRIT. Y.B. INT'L L. 220, 227-54; McDougal, Burke & Vlasic, *The Maintenance of Public Order at Sea and the Nationality of Ships*, 54 AM. J. INT'L L. 25, 30-34 (1960) [hereinafter cited as McDougal *et al.*]; Wittig, *supra* note 63, at 127-30. Efforts to extend the protection of U.S. labor laws to seamen who serve aboard flag of convenience vessels have proven unsuccessful. *See McCulloch v. Sociedad Nacional*, 372 U.S. 10 (1963).

87. For an account of the tensions that have evolved between Europe and the United States over U.S. shipping policies, see B. BOCZEK, *supra* note 6, at 81-90.

sire to use them. On the other, the practice appears to them to be unconscionable and not in the spirit of international comity and use of the seas for the benefit of mankind.

The basis of the dispute appears to lie in the structure of national taxation laws. A major reason for resorting to flags of convenience is the tax benefits that may be derived therefrom. Consider the experience of two coastal states. Costa Rica, one of the traditional flag of convenience states, significantly reformed its vessel registration laws in 1958 to curb abuses that were taking place. One of the aspects of the reform was an increase in taxation. As a result, shipowners were discouraged from registering in Costa Rica, and the country has effectively ceased to be a flag of convenience state.⁸⁸ Conversely, there had been a long tradition of registering Greek-owned vessels under flags of convenience, due to heavy taxation, fears of nationalization, and outdated shipping laws. In 1953 there was a general reform of Greek shipping laws, which provided major tax benefits to shipowners registered under the Greek flag. The result has been a return to the Greek flag by many Greek shipowners.⁸⁹

Although the essence of the dispute between European maritime states and the United States is economic in nature, the political and strategic overtones should not be ignored. A major incentive to flag of convenience use by American shipowners is the structure of U.S. shipping and taxation laws, which, in the interests of harmonious foreign relations, should be amended to make American registry more attractive.⁹⁰

C. *The Legal Significance of a Flag of Convenience*

An essential element in determining how to deal with the tragedy of oil pollution at sea is to comprehend the concept of a flag of convenience under international law. There are two fundamental principles of international law which are directly applicable to ships on the high seas. The first involves the maxim that there shall be free use of the seas.⁹¹ As stated in Article 2 of the Convention on the High Seas,⁹² "[t]he high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty." A corollary to this principle is that a state holds exclusive competence to grant nationality to ships. Article 5 of the High Seas Convention provides, *inter alia*, that "[e]ach 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. Ships have the nationality of the State whose flag they are entitled to fly. . . ."

Hence, an integral aspect of the right of a state to grant nationality is

88. *Id.* at 46-49.

89. *Id.* at 36-38; and McDougal *et al.*, *supra* note 86, at 36 n.32.

90. B. BOCZEK, *supra* note 6, at 87-90; and McDougal *et al.*, *supra* note 86, at 35-36.

91. *See, inter alia*, I. BROWNLIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 233-36 (2d ed. 1973); C. COLOMBOS, *INTERNATIONAL LAW OF THE SEA* 47-86 (6th ed. 1967); I. L. OPPENHEIM, *INTERNATIONAL LAW* 588-94 (8th ed. H. Lauterpacht ed. 1955).

92. *Done at Geneva*, Apr. 29, 1958, [1963] 2 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82 [hereinafter cited as High Seas Convention].

that such nationality will be recognized by other states. These basic principles of international law have become well established by state practice and confirmed by bilateral and multilateral agreements. However, the practice of granting flags of convenience has led to certain incursions into these basic theories, such as the practice of effective United States control of certain flag of convenience ships, and the theory of the "genuine link," which appears in Article 5 of the High Seas Convention. Moreover, the status of flag of convenience states in the world shipping community was hotly disputed by members of the Intergovernmental Maritime Consultative Organization (IMCO) when it came time to choose the membership of the Maritime Safety Committee. The dispute ultimately was submitted to the International Court of Justice for an advisory opinion. These considerations will be discussed below, as they apply generally to flags of convenience, and as they have risen to prominence as a result of the extensive use of these flags.

1. *The Right of a State to Grant Nationality to Ships*

It has become an established tradition to international law, first, that a ship on the high seas must have a national character, and second, that states have exclusive, unilateral competence to grant nationality. The outward sign of nationality is the flag flown by the ship, which must be supported by the necessary registration and documentation on board.⁹³ However, the right to determine exactly what criteria must be met for a ship to be entitled to nationality is a matter of domestic law of individual states.⁹⁴

93. See generally B. BOCZEK, *supra* note 6, at 91-124; C. COLOMBOS, *supra* note 91, at 264-68; H. MEYERS, *THE NATIONALITY OF SHIPS* 122-43 (1967); R. RIENOW, *THE TEST OF THE NATIONALITY OF A MERCHANT VESSEL* (1937); McDougal *et al.*, note 86 *supra*.

94. This proposition was stated as an accepted principle in *The Muscat Dhows* case between France and Great Britain; "generally speaking it belongs to every sovereign to decide to whom he will accord the right to fly his flag and to prescribe the rules governing such grants. . . ." Award of the Tribunal, The Hague, Aug. 8, 1905, reprinted in SCOTT, *HAGUE COURT REPORTS* 93, 96 (1916). The case of *Lauritzen v. Larsen* in the United States Supreme Court also accepted as a general principle that "[e]ach state under international law may determine for itself the conditions on which it will grant its nationality to a merchant ship, thereby accepting responsibility for it and acquiring authority over it. Nationality is evidenced to the world by the ships papers and its flag." 345 U.S. 571 (1953).

The grant of nationality, therefore, gives a state jurisdiction over the ship on the high seas, where no other sovereign may exercise that power, and also the right to protect the ship on the high seas. Furthermore, the right to determine whether a ship has fraudulently acquired nationality is an exclusive matter for the flag state. See *The Virginus*, (1873), 2 J. MOORE, *INTERNATIONAL LAW DIGEST* 895 (1906). As evidenced in several international conventions, the criterion for establishing the nationality of a ship is by registration. See, e.g., International Load Line Convention, art. 3(a), done at London, July 5, 1930, T.S. 858, 47 Stat. 2228, 135 L.N.T.S. 301: "[A] ship is regarded as belonging to a country if it is registered by the Government of that country." International Convention for the Prevention of Pollution of the Sea by Oil, art. 2, done at London, May 12, 1954, 12 U.S.T. 2989, T.I.A.S. No. 4900, 327 U.N.T.S. 3: "The present Convention shall apply to sea-going ships registered in any of the territories of a Contracting Government"

2. Recognition of the Nationality of Ships

A necessary corollary to the right of a state to grant nationality to a ship is that other states will conclusively recognize that nationality as evidenced by the flag. This grant has been called an act of state,⁹⁵ entitled to recognition among sovereign equals; the rule has been praised as promoting order on the high seas.⁹⁶ It follows that documentation by the proper authority and registration are the only elements of nationality required by international law to support recognition.⁹⁷ As has been indicated, the requirements that may be imposed on a ship to be granted registration are a matter of domestic concern, and this principle of recognition has generally been followed in a number of treaties.⁹⁸

Although the principles of nationality and recognition have long been followed and supported, they have not been free from controversy. One commentator has gone so far as to assert that a ship's nationality is but a legal fiction, that registration does not afford nationality, and that nationality is not a valid basis for either recognition or the right of a state to protect its ships.⁹⁹ As the practice of using flags of convenience has grown, with the concurrent growth in opposition to the practice, the idea of requiring a "genuine link" between a ship and its flag state has developed. As will be seen, this has become a hotly discussed and much

95. See B. Boczek, *supra* note 6, at 93 for the proposition that granting nationality is an act of state, conclusive for all purposes. *But see* Goldie, *supra* note 86, at 277-79, who disputes this assertion, maintaining that it is an unwarranted extension of the doctrine.

96. See generally, B. Boczek, *supra* note 6, at 106-16; Goldie, *supra* note 86, at 262-64; Herman, *supra* note 9, at 8-9; McDougal *et al.*, *supra* note 86, at 26-28, 53-66; Watts, *The Protection of Merchant Ships*, [1957] *BRR. Y.B. INT'L L.* 52, 56.

97. "[I]nternational law does not require that a vessel, in order to be considered of the nationality of a certain State, be built in such State, be navigated by a crew who are nationals of such State, be owned in whole or in part by its nationals. . . ." R. RIENOW, *supra* note 93, at 116.

98. There is actually no correlation between ownership and nationality; the treaties and correspondence of States do not indicate the need for national ownership; and although some States refuse to consider as of their own respective nationalities, vessels, the titles to which are not held by nationals, their practice indicates that they do not deny other States the privilege of dispensing with this requirement.

Id. The United States has entered into numerous bilateral treaties of friendship, commerce, and navigation which provide for reciprocal recognition of national ships based on registration. For example, article XV of the treaty between the United States and Liberia provides:

Merchant vessels and other privately owned vessels under the flag of either of the High Contracting Parties, and carrying the papers required by its national laws in proof of nationality shall, both within the territorial waters of the other High Contracting Party and on the high seas, be deemed to be the vessels of the Party whose flag is flown.

Treaty of Friendship, Commerce, and Navigation, United States-Liberia, *done at* Monrovia, Aug. 8, 1938, 45 Stat. 1739, 1745 T.S. No. 956, 201 L.N.T.S. 163. See also Treaty of Friendship, Commerce and Consular Rights, United States-Honduras, art X, Dec. 7, 1927, 45 Stat. 2618, T.S. No. 764, 87 L.N.T.S. 421. There is no comparable treaty between the United States and Panama.

99. See Watts, note 96 *supra*.

disputed concept.

3. *The Genuine Link*

The concept of the genuine link was originally proposed by the International Law Commission.¹⁰⁰ The draft that was finally agreed upon and presented to the Geneva Conference provided that:

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. Ships have the nationality of the State whose flag they are entitled to fly. Nevertheless, for purposes of recognition of the national character of the ship by other States, there must exist a genuine link between the State and the ship.¹⁰¹

This version of the concept of the genuine link was conceived shortly after the appearance of the *Nottebohm* decision by the International Court of Justice,¹⁰² which found a necessity for a "genuine connection" between an individual and a State as a condition precedent to conferring nationality. The purpose of the genuine link concept in maritime law was to extend the application of *Nottebohm* from individuals to ships. Hence, in order for the nationality of a ship to be recognized by other States, there must be a "real and effective link" between the ship and the state whose flag it flies. After considerable discussion both by the International Law Commission and at the Geneva Conference, the concept was finally adopted in Article 5 of the High Seas Convention: "There must exist a genuine link between the State and the ship; in particular, the State must effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag."¹⁰³

There is no definition of what constitutes a genuine link anywhere in the text, principally because there is no agreement as to precisely what it is.¹⁰⁴ The requirement of a genuine link "for purposes of recognition" has been dropped, but the vague terminology of effective exercise of jurisdiction has been added. A major reason for proposing a requirement of a genuine link was dissatisfaction by many maritime states with the increasing and illegitimate employment of flags of convenience. It was contended that flag of convenience ships had essentially no meaningful link with their states of registry, and that, therefore, other states should not be required to recognize their nationality.¹⁰⁵

Both the positive and negative reaction to the genuine link controversy has been voluminous. Professor McDougal maintained that the concept was entirely unsupported by customary international law, that it

100. For the evolution of the concept by the International Law Commission and later at the Geneva Conference, see McDougal *et al.*, *supra* note 86, at 104-14; and B. BOCZEK, *supra* note 6, at 232-86.

101. Quoted in McDougal *et al.*, *supra* note 86, at 105.

102. *Liechtenstein v. Guatemala*, [1955] I.C.J. 4.

103. Note 92 *supra*. See Herman, *supra* note 62, at 11.

104. See McDougal *et al.*, *supra* note 86, at 110-11.

105. See B. BOCZEK, *supra* note 6, at 240-42.

would in no way solve the problems supposed to exist; furthermore, carried to its logical conclusion, it would produce unnecessary chaos in an already irrational system.¹⁰⁶ In recommending that states should reject the genuine link provision in Article 5, he asserted: "It is yet to be demonstrated that any conceivable good for the common interest of peoples could attend the introduction of this new-found requirement of genuine link. . . . On the contrary, it would seem reasonably clear that the only purposes it would serve are those of disruption, controversy and anarchy."¹⁰⁷

Other writers, however, have maintained that not only does *Nottebohm* establish the need for a genuine link with respect to flags of convenience, but it also provides authority for concluding "that the mere grant of nationality to individuals by some States does not bind others to an unlimited obligation to recognize those grants. . . . Recognition may . . . be dependent upon a regime of the reciprocity or of the community of law between the creating and recognizing States."¹⁰⁸ It has also been suggested that the necessary link, rather than being merely registration, is in reality beneficial ownership.¹⁰⁹ Dr. Boczek concludes that:

[T]he Geneva conference has not solved the problem of the flags of convenience and . . . it is not likely to reduce the tonnage of ships sailing under flags of convenience. Article 5 does not take into account

106. The introduction into this rational process of decision of the new-found contrivance of genuine link could do incalculable harm. It could make statelessness commonplace when so far it has existed only as an extreme rarity; it could undermine, if not render worthless, an enormous number of bilateral treaties of commerce and navigation, which require recognition of unilateral competence to determine national character; it could result in assertions of an unrestricted right of visit and search against vessels navigating on the high seas suspected of the absence of a genuine link with the state whose flag they otherwise lawfully fly; it could encourage arbitrary and uncontrollable discrimination by states against vessels of other states; it could create international tension by authorizing unilateral interferences in matters hitherto regarded as of strictly national competence, to wit: the comprehensiveness or appropriateness of a state's shipping legislation; . . . and so on, in realistic horrors in expectation.

McDougal *et al.*, *supra* note 86, at 114-15.

107. *Id.* at 115.

A foretaste of the wide possibilities for abuse which the doctrine of genuine link provides is afforded by a news item reporting the first concrete application of this innovation. The report states that the U.S.S.R. has issued an order which imposes upon all ships flying supposed flags of convenience harbor fees approximately three times higher than those applicable to vessels of traditional maritime countries. *New York Times*, Aug. 31, 1958, § 5, p. 11. Since it is commonly known that 40 percent of these ships are owned by American corporations, it is easy to see that the genuine link's first practical test has taken place on the cold-war battlefield.

Id. n.280.

108. Goldie, *supra* note 86, at 268-69.

109. Watts, *supra* note 96, at 78-84. This position has been sharply criticized by McDougal, Burke, and Vlasic, and by Boczek.

the criterion of ownership, confirming thus the established principle of international law that foreign-owned vessels may be registered under the flag of any state.¹¹⁰

In the final analysis, perhaps the concept of the genuine link has only created a furor in academia, without having a significant impact on the course of international law. It has been asserted that, in spite of the elusiveness of the genuine link theory, most ships do have the requisite link, even those registered in such countries as Liberia.¹¹¹ Furthermore, in terms of regulating flag of convenience ships and exercising jurisdiction over them, it has been suggested that coastal states are well enough able to provide adequate regulation. Thus, the existence of a genuine link is pragmatically irrelevant.¹¹²

Nevertheless, the concept of a genuine link is becoming ever more firmly established. The provision of Article 5 of the High Seas Convention reappears in Articles 91 and 94 of the Informal Composite Negotiating Text of the Third Conference on the Law of the Sea.¹¹³ In addition, the United Nations Conference on Trade and Development has conducted an extensive study on the consequences of the existence or lack of a genuine link between a ship and its nation of registry.¹¹⁴ The Conference recommended that there should be some definition of what constitutes a genuine link, suggesting as elements:

- (a) the fact of registration;
- (b) a substantial share of beneficial ownership in the vessel by nationals (individuals or legal entities) of the flag state;
- (c) the principal place of business and effective management of the legal entity which has beneficial ownership of the vessel should be in the flag state; and
- (d) the principal officers of the legal entity beneficially owning the vessel should be nationals of the flag state.¹¹⁵

Hence, it may safely be concluded that the genuine link will remain a concept in international law, in some form, for some time to come. However, it may equally be asserted that the existence of flag of convenience states has also become firmly established.¹¹⁶ At this point in time, the

110. B. BOCZEK, *supra* note 6, at 285 [citations omitted].

111. See H. MEYERS, *supra* note 93, at 275-99.

112. See Herman, *supra* note 9, at 3.

113. United Nations Third Conference on the Law of the Sea: Informal Composite Negotiating Text from the Sixth Session, U.N. Doc. A/CONF.62/WP.10 (1977), reprinted in 16 INT'L LEGAL MAT. 1108 (1977).

114. UNCTAD Report, note 5 *supra*.

115. *Id.* at 20.

116. The *Torrey Canyon* incident provides an illustration of the difficulty of ascertaining wherein lies the genuine link. The ship was registered under a Liberian flag, owned by a Bermuda corporation, which was a subsidiary of a U.S. corporation, chartered to a British oil company, and manned by an Italian crew. The accident occurred off the west coast of England, and the events which followed the accident were handled by the affected coastal states, Great Britain and France. See Cusine, *supra* note 8, at 106; Juda, *supra* note 8, at

issue of whether the genuine link requirement will pose a significant constraint on the illegitimate employment of the flag of convenience shield from liability remains unanswered.

4. *The IMCO Controversy*

A dispute arose during the late 1950's within the membership of the Intergovernmental Maritime Consultative Organization concerning the composition of its Maritime Safety Committee. Article 28(a) of the constitution of the Maritime Safety Committee provides in part: "The Maritime Safety Committee shall consist of fourteen Members elected by the Assembly from the Members, governments of those nations having an important interest in maritime safety, of which not less than eight shall be the largest ship-owning nations"¹¹⁷ When it came time to elect the Committee, disagreement arose as to how to determine the eight largest ship-owning nations, and whether, once determined, those eight members were automatically on the Committee. According to *Lloyd's Register of Shipping Statistical Tables* for 1958, the eight largest ship-owning countries, determined by gross registered tonnage, included Liberia in third place and Panama in eighth.¹¹⁸ A number of countries, opposed to flag of convenience registry, asserted that Panama and Liberia were not really ship-owning countries, that they were not adequately interested in maritime safety, and that, at any rate, they should not automatically be elected to the Committee.¹¹⁹ Several other methods of determining the largest ship-owning nations were proposed, and ultimately an election was held in which neither Panama nor Liberia were elected to the Committee. The validity of the election was challenged, and the dispute was submitted to the International Court of Justice for an advisory opinion. The Court determined that "where in Article 28(a) 'ship-owning nations' are referred to, the reference is solely to registered tonnage. The largest ship-owning nations are the nations having the largest registered ship tonnage."¹²⁰ Therefore, by not electing Liberia and Panama to the Committee, the Assembly failed to comply with the requirements of the IMCO constitution.¹²¹

This decision strongly supports the relationship between registration and nationality. However, there is some disagreement over the significance of the opinion. Professor Boczek asserts that it "will certainly be an argument for the case of flag of convenience states not only in direct application to the constitution of the Maritime Safety Committee of the IMCO . . . but also in the international legal situation of the flag-of-con-

558.

117. Quoted in B. Boczek, *supra* note 6, at 154.

118. *Id.* at 131.

119. For a general discussion and analysis of the case, see *id.* at 125-55.

120. Constitution of the Maritime Safety Committee of the Inter-Governmental Maritime Consultative Organization, Advisory Opinion of 8 June 1960, [1960] I.C.J. 150, 170.

121. *Id.* at 171.

venience fleets in general."¹²² On the other hand, Goldie maintains that "[t]he IMCO advisory opinion was . . . a decision which turned on a question of treaty interpretation, not of the substantive rights of States under general international law."¹²³ The Court carefully avoided any political implications and made it clear that "any further examination of the contention based on a genuine link is irrelevant for the purpose of answering the question which has been submitted to the Court . . ."¹²⁴ Nevertheless, the opinion unquestionably affirms the status of such flag of convenience states as Liberia and Panama as equal members of the world maritime community.

5. *Jurisdiction Over Ships*

a. *On the High Seas*¹²⁵

It is a well established rule of international law relating to jurisdiction that:

[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 seas, that is to say, the absence of any territorial sovereignty upon the high seas, no State may exercise any kind of jurisdiction over foreign vessels upon them.¹²⁶

This general principle has been embodied in Article 6 of the High Seas Convention: "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." The exceptional cases include such things as piracy, slave trade, hot pursuit, and collisions.¹²⁷ As will be seen below, certain international conventions dealing with oil pollution provide for intervention on the high seas by nations other than the flag state.

In view of customary exclusive jurisdiction by the flag state, it is of general international concern that flag of convenience states do not exercise effective jurisdiction over their registered ships on the high seas, in part because they are incapable of doing so, and in part because effective regulation of such ships by flag states would pose a disincentive for flag of convenience registry.¹²⁸ It is impossible for a flag of convenience state to enforce any construction or safety standards on its ships because the ships rarely sail into its national ports, and its navy is far too small to police its massive merchant flag fleet.¹²⁹ As will be discussed in detail below, this problem may be minimized by regulations imposed by coastal

122. B. Boczek, *supra* note 6, at 155.

123. Goldie, *supra* note 86, at 271.

124. [1960] I.C.J. at 171.

125. See generally C. COLOMBOS, *supra* note 91, at 272-86.

126. The S.S. Lotus, [1927] P.C.I.J., ser. A, No. 10, at 25.

127. I. BROWNLIE, *supra* note 91, at 249.

128. See UNCTAD Report, *supra* note 5, at 71-74; and MEYERS, *supra* note 93, at 291-98.

129. H. MEYERS, *supra* note 93, at 292-95.

states.¹³⁰

b. *In Territorial Waters*

When a ship enters territorial waters, or the port of a coastal state, it is subject to that state's sovereignty and its concurrent jurisdiction over it.¹³¹ Generally speaking, the coastal state's right to exercise jurisdiction is limited to matters which have an effect on that state's interests, and does not extend to the strictly internal management of the ship's affairs. However, as will be discussed, a coastal state does have jurisdiction to protect its environment, and may lawfully impose environmental and safety obligations upon any ship that enters its territorial waters and uses its ports.

c. *"Effective United States Control"*

One of the customary rules of international law is that during times of emergency, a state has the right to requisition ships of its registry.¹³² However, the United States has also developed a theory that in times of national emergency the government may requisition ships in which there is beneficial ownership in United States citizens.¹³³ In fact, a large portion of the U.S. flag of convenience fleet has been included in mobilization capability plans for American defense.¹³⁴ The power of the U.S. Government is based on the Merchant Marine Act of 1936, which provides that: "Whenever the President shall proclaim that the security of the national defense makes it advisable . . . it shall be lawful for the Commission . . . to requisition or purchase any vessel or other watercraft owned by citizens of the United States. . . ."¹³⁵

The assertion of this right is based entirely on domestic law and is against the weight of international law. In any cases where the U.S. has directed the movements of a U.S.-owned ship of foreign registry, it has been by virtue of the friendly acquiescence of the flag state.¹³⁶ If a situation were to arise in which both the U.S. and the flag state asserted a right to requisition certain ships, the flag state would have the primary right under international law. While this situation has not yet arisen, it is not inconceivable; hence, the effectiveness of the doctrine of "effective U.S. control" is open to question.¹³⁷

Another method of asserting jurisdiction over U.S.-owned ships (which is somewhat related to the doctrine of "effective U.S. control") is analogous to piercing the corporate veil. The basis of the claim is an assertion of jurisdiction over United States citizens and their activities, re-

130. *Id.* at 297.

131. See generally I. BROWNLIE, *supra* note 91, at 204; C. COLOMBOS, *supra* note 91, at 290-305; McDougal *et al.*, *supra* note 86, at 84-88.

132. See McDougal *et al.*, *supra* note 86, at 63, 65-66.

133. For an exposition and analysis of the doctrine of "effective U.S. control" see B. BOCZEK, *supra* note 6, at 188-208.

134. *Id.* at 190-91.

135. Merchant Marine Act of 1936, 46 U.S.C. § 1242(a) (1976).

136. See B. BOCZEK, *supra* note 6, at 194.

137. See *id.* at 202-08.

ardless of where or under what guise they occur. An example is *Gerradin v. United Fruit Co.*,¹³⁸ which involved the application of the Jones Act¹³⁹ to a seaman's injury occurring on a ship on the high seas. The ship was flying a Honduran flag, but was owned by U.S. citizens. In asserting jurisdiction, the court stated:

There can be no doubt about the power of Congress to impose liability upon its own citizens for acts done on the high seas or at other places outside its territorial jurisdiction. . . . [I]t seems but a slight disregard of the symbol of foreign registry to apply an ordinary rule of torts to a shipowner who bears such an illusory shield.¹⁴⁰

A logical extension of this rationale would allow American courts to enforce a multitude of U.S. statutes against U.S. shipowners, regardless of the flag of registry or the location of the ship.

IV. MULTILATERAL EFFORTS TO SOLVE THE PROBLEM OF MARITIME OIL POLLUTION

A. *The Nature and Scope of the Problem*

Pollution of the sea by oil is a multi-faceted problem of ever-increasing dimension, which requires a comprehensive regulatory regime if it is to be adequately contained, and ultimately, eliminated. The tremendous growth in the transportation of oil and the number and size¹⁴¹ of tankers¹⁴² has led to the necessity for establishing international standards for all aspects of tanker operations. While the preceding discussion reviewed the traditional notions of the law of the seas which placed the right and obligation of regulating ships upon the flag state, contemporary experience has proven that this regime is wholly inadequate. The example of Liberia is sufficient to illustrate the problem. In view of the fact that Liberia has the largest single tanker fleet in the world — twenty-five percent of the world total¹⁴³ — of which most ships rarely, if ever, sail into Liberian ports, it is impossible for Liberia to enforce any national legislation over its registered ships, even if it should choose to do so. Nevertheless, there must be some enforceable regulation of transportation on the high seas, preferably by international cooperation, before the seas irre-

138. 60 F.2d 927 (2d Cir. 1932).

139. Jones Act, 46 U.S.C. § 688 (1976).

140. 60 F.2d at 929. The U.S. Supreme Court, however, has more recently concluded that U.S. labor laws may not be imposed upon flag of convenience vessels. *McCulloch v. Sociedad Nacional*, 372 U.S. 10 (1963).

141. See OIL TRANSPORTATION BY TANKERS, *supra* note 10, at 18 and 92.

142. A tanker is defined as a "self-propelled ship designed for carrying liquid oil cargo in bulk." The capacity of a supertanker is in excess of 100,000 deadweight tons (dwt). The typical size categories of supertankers are classified as very large crude carriers (VLCC) - 200,000-400,000 dwt, and ultra-large crude carriers (ULCC) - greater than 400,000 dwt. The dimensions of an average 100,000 dwt supertanker are approximately 1,000 feet in length and 50 feet in draft. There are supertankers under construction of 533,000 dwt, 1,360 feet long, 208 feet wide, and 93 feet in draft. One ton of crude oil is the equivalent of 311 gallons. *Id.* at xvii.

143. See *id.* at 17.

trievably fall prey to what may be referred to as "the tragedy of the commons."¹⁴⁴

B. *The International Conventions of IMCO*

There have been a number of multilateral efforts to deal with the serious problem of oil pollution by maritime vessels at sea.¹⁴⁵ For example, Article 24 of the High Seas Convention attempts to place the burden upon individual nations to address this problem, by providing that "[e]very State shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships . . . taking account of existing treaty provisions on the subject."

Most international conventions dealing with the environmental regime of the seas have been drafted by IMCO and presented to the governments of member states for ratification and implementation. IMCO is among the smallest of the United Nations' specialized agencies.¹⁴⁶ Its functions are stipulated to be no more than "consultative and advisory."¹⁴⁷ Thus, it may convene conferences, make recommendations to the world community in the form of draft conventions, and may generally facilitate intergovernmental cooperation on technical matters, including

144. This phenomenon has been related to pollution by Garrett Hardin as follows:

In a reverse way, the tragedy of the commons reappears in problems of pollution. Here it is not a question of taking something out of the commons, but of putting something in. . . . The calculations of utility are much the same as before. The 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.

Quoted in Juda, *supra* note 8, at 579 n.115. See G. HARDIN & J. BADEN, *MANAGING THE COMMONS* (1977).

145. See generally Juda, note 8, *supra*; Mensah, note 57 *supra*; Note, *International Conventions on Ship-based Pollution*, 10 J. WORLD TRADE L. 389 (1976); *Conventions and Amendments Relating to Pollution of the Sea by Oil: Hearings on Executive G, Before the Subcomm. on Oceans and International Environment of the Senate Comm. on Foreign Relations*, 92d Cong., 1st Sess. (1971).

146. Juda, *supra* note 8, at 559.

147. *Id.* One commentator has focused on the weakness of the IMCO organizational structure:

At present, IMCO is the primary international agency studying the oil pollution area. But IMCO has organizational and political drawbacks. It has no real regulatory powers; it can only make recommendations to its members. It seems likely that effective regulation is the most important aspect in the effort to control pollution. IMCO also is very limited financially and, as a result, cannot undertake ambitious research and planning projects. IMCO is certainly not independent of the shipping industry in general and relies heavily on research done by private and public organizations. It is questionable whether such an organization could ever be effective in controlling pollution regardless of the expressed position of the international community of states. Thus, a new organization or a reconstituted IMCO may be required.

Hunter, *Possibilities and Problems of Preventing Oil Pollution of the Oceans*, 4 *TRANSP. L.J.* 21, 55 (1972) [citations omitted].

safety and navigation.¹⁴⁸ However, it may not adopt a legally binding instrument; it may do no more than submit proposals to states, which may or may not be adopted as binding conventions. And although a number of conventions addressing the subject of maritime pollution and liability have been drafted and presented by IMCO to the world community for ratification,¹⁴⁹ many have not yet entered into force.

The first convention to be ratified was the 1954 International Convention for the Prevention of Pollution of the Sea by Oil.¹⁵⁰ In order for it to enter into force, assent was required by ten governments, including five having not less than 500,000 gross tons of tanker tonnage.¹⁵¹ While the United States, Liberia, and Panama were not among the first ten to ratify, they have since done so. The Convention applies to seagoing vessels registered in any of the contracting states,¹⁵² and prohibits the discharge of oil or oily mixtures from tankers of 500 tons or larger within 50 miles of land.¹⁵³ Every ship must carry on board an oil record book¹⁵⁴ in the form provided by the Convention,¹⁵⁵ which may be inspected by the proper authorities of any contracting state.¹⁵⁶ Any violations of the standards of the Convention must be reported to the government of the state of registry,¹⁵⁷ which is then obliged to exact appropriate penalties according to its national laws.¹⁵⁸

In 1962, a conference was convened by IMCO to review this convention. The conference adopted amendments extending its application to vessels of smaller gross tonnage, and extending the prohibited zones (where no discharge is allowed).¹⁵⁹ There are currently fifty-two states party to the convention (including flag of convenience states), which account for ninety-five percent of the world tanker fleet.¹⁶⁰ The IMCO Assembly adopted additional amendments to the 1954 convention in 1969¹⁶¹ and 1971.¹⁶² The 1969 amendments provide for further reduction and limitation of the amount of oil that may be discharged. They strictly prohibit

148. Juda, *supra* note 8, at 559-60. Jurisdiction over economic maritime matters rests with UNCTAD. *Id.* at 560.

149. Actually, it was not until the *Torrey Canyon* disaster that ocean pollution became a major focus of concern for IMCO. *Id.* at 562. See generally Nanda, note 8 *supra*.

150. Entered into force July 26, 1958, [1961] 1 U.S.T. 2989, T.I.A.S. No. 4900, 327 U.N.T.S. 3.

151. *Id.* art. XV.

152. *Id.* art. II.

153. *Id.* art. III and Annex A.

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

155. *Id.* Annex B.

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

157. *Id.* art. X.

158. *Id.* art. VI. See generally Juda, *supra* note 8, at 560-61.

159. The text of the Amendments which were adopted in 1962 and ratified by the United States in 1966 appears at 17 U.S.T. 1523, T.I.A.S. No. 6109, 600 U.N.T.S. 332.

160. Mensah, *supra* note 57, at 116.

161. 12 U.S.T. 2989, 17 U.S.T. 1523, reprinted in 9 INT'L LEGAL MAT. 1 (1970).

162. Reprinted in 11 INT'L LEGAL MAT. 267 (1972).

the discharge of more than sixty liters of oil per nautical mile anywhere in the ocean, even at distances more than fifty miles from shore.¹⁶³ Also, flag state governments which have been notified of violations by their ships are required to report to IMCO what action, if any, has been taken against the ship. The 1971 amendments establish construction standards based upon the ship's dimensions, providing for compartmentalization, limitations of tank sizes, and requirements involving the arrangement of tanks. However, neither of these amendments has yet received adequate ratification to enter into force.

In 1973 IMCO convened an International Conference on Marine Pollution,¹⁶⁴ whose purpose was to update the 1954 Pollution Convention to make it more responsive to current tanker practices. The Conference produced the International Convention for the Prevention of Pollution from Ships.¹⁶⁵ When the convention enters into force, it will supersede the 1954 convention between those countries that ratify it. In essence, it incorporated the 1954 convention with amendments, but provides for complete elimination of intentional pollution and minimization of accidental discharges.¹⁶⁶ It addresses not only the discharge of oil at sea, but also prevents the discharge of any "harmful substance," a term which is defined to include "any substance which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea"¹⁶⁷ Each nation which becomes a party to the Convention must promulgate legislation which prohibits and imposes sanctions on such violations by vessels flying its flag wherever such violations occur. On the high seas the state of registry will continue to have sole jurisdiction; but if a violation occurs in the territorial waters of a contracting state, that state may assert jurisdiction, regardless of the registry of the ship (provided, of course, that the violator flies the flag of a contracting state).¹⁶⁸

In the aftermath of the *Torrey Canyon* disaster, the International Convention Relating to Intervention of the High Seas in Cases of Oil Pollution Casualties¹⁶⁹ was adopted in 1969. The purpose of this convention is to permit a coastal state to intervene on the high seas in the case of a casualty or the threat of one in order to prevent or minimize harm to its

163. See *Juda*, *supra* note 8, at 567.

164. See *Mensah*, *supra* note 57, at 117-22; see also *1973 IMCO Conference on Marine Pollution from Ships, Hearing Before the Senate Comm. on Commerce*, 93d Cong., 1st Sess. (1973).

165. *Done at London*, Nov. 2, 1973, *opened for signature* Jan. 15, 1974, *reprinted in* 12 INT'L LEGAL MAT. 1319 (1973) [hereinafter cited as 1973 Convention].

166. *Id.* Preamble.

167. *Id.* art. 2.

168. *Id.* arts. 4 and 6.

169. *Done at Brussels*, Nov. 29, 1969, 26 U.S.T. 765, T.I.A.S. No. 8068, *entered into force* for the United States, May 6, 1975; *reprinted in* 9 INT'L LEGAL MAT. 25 (1970) [hereinafter cited as *Intervention Convention*].

coastal environment. A coastal state is required to notify and consult the flag state, IMCO, and neighboring coastal states which may also be affected prior to such intervention, except in the case of an extreme emergency when action may be taken without prior notification or consultation. Any intervention must be proportionate to the threat of harm involved. The Intervention Convention entered into force for the United States in 1975, and has also been ratified by Liberia.¹⁷⁰

The primary convention relating to liability for oil pollution is the International Convention on Civil Liability for Oil Pollution Damage.¹⁷¹ This Convention places strict liability on the shipowner for oil pollution damage, but in the absence of fault or privity of the shipowner in causing the damage, he may limit his liability based on the tonnage of the ship to a maximum of approximately \$16.8 million. The Convention requires shipowners of contracting states to maintain adequate insurance to cover the full extent of their liability under the Convention. The ship is further required to carry a certificate evidencing such insurance coverage. A contracting state may deny access to its ports of any ship that does not have the required insurance certificate, including a ship of a state that is not party to the convention.¹⁷² Presumably, this convention would apply to U.S. shipowners, regardless of the registry of the ship, but for the fact that the United States has not ratified it.

In view of the fact that the Civil Liability Convention does not provide adequate compensation to victims of oil pollution casualties, in 1971 IMCO drafted the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.¹⁷³ This convention establishes a compensation fund of up to thirty million dollars for oil pollution casualties. The fund is established and maintained by oil companies in contracting states and provides reimbursement to tanker owners. However, a tanker owner or his insurer will not be reimbursed in the event of his failure to comply with IMCO conventions, which itself provides a strong incentive for compliance. While this convention contains some very effective provisions for ensuring compliance and compensating losses, it has not yet entered into force.¹⁷⁴

There are, in addition, two voluntary liability plans that have been implemented by tanker owners. In 1969 the Tanker Owners' Voluntary Agreement Concerning Liability for Oil Pollution (TOVALOP)¹⁷⁵ was

170. See Mensah, *supra* note 57, at 124-26; Juda, *supra* note 8, at 566; Wittig, *supra* note 63, at 134 n.112.

171. Done at Brussels, Nov. 29, 1969, reprinted in 9 INT'L LEGAL MAT. 45 (1970) [hereinafter cited as Civil Liability Convention]. See generally, Watson, *The 1976 IMCO Limitation Convention: A Comparative View*, 15 Hous. L. Rev. 249 (1978).

172. See Mensah, *supra* note 57, at 126-28; Wittig, *supra* note 63, at 134-35. The carrier is not, however, liable for damages caused by an act of God, act of war, hostilities, civil war or insurrection — the traditional common law defenses to liability for common carriers.

173. Done at Brussels, Dec. 18, 1971, reprinted in 11 INT'L LEGAL MAT. 284 (1972).

174. See Juda, *supra* note 8, at 566-67; Wittig, *supra* note 63, at 135-136 n.115.

175. Signed Jan. 7, 1969, reprinted in 8 INT'L LEGAL MAT. 497 (1969).

agreed to, and now embraces ninety-nine percent of the world's tanker tonnage. The Agreement requires participating tanker owners to reimburse governments for the clean-up costs of oil spills at the rate of \$100 per gross registered ton or \$10 million per incident.¹⁷⁶ A second agreement, the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution (CRISTAL),¹⁷⁷ was entered into in 1971 and increases liability coverage to thirty million dollars per incident. Both of these agreements are intended to be temporary measures, pending the entry into force of the IMCO conventions.

C. *The Law of the Sea Treaty*

The draft Law of the Sea Treaty¹⁷⁸ includes several provisions significantly affecting the rights and duties of vessels on the high seas and in territorial waters. As of the date of this writing, the draft convention had not yet been completed and opened for signature; nevertheless, it was contemplated that it would be tendered to the world community during 1981.¹⁷⁹ Although its emphasis is on matters other than the environment, and it was drafted outside the framework of IMCO, the Law of the Sea Treaty will, when consummated, have an important role in restricting maritime pollution. It strongly reaffirms many of the principles to which this article is addressed.

Although the draft Law of the Sea Treaty extends the territorial limits of coastal states to twelve nautical miles,¹⁸⁰ it provides for the right of innocent passage through waters.¹⁸¹ This right may be circumscribed by the coastal state where the vessel engages in "willful and serious pollution. . . ."¹⁸² Moreover, the coastal states may adopt measures which regulate innocent passage through territorial waters where necessary to ensure the "preservation of the environment of the coastal state and the prevention, reduction and control of pollution. . . ."¹⁸³ Ships in transit have the coordinate obligations to comply with international standards regarding both safety¹⁸⁴ and environmental pollution.¹⁸⁵

176. See Wittig, *supra* note 63, at 136.

177. *Id.*

178. Draft Convention on the Law of the Sea (Informal Text); Third U.N. Conference on the Law of the Sea, Resumed Ninth Session, Geneva (July 28-Aug. 29, 1980), U.N. Doc. A/Conf.62/WP.10/Rev.3/Add.1 (1980) [hereinafter cited as the Law of the Sea Treaty]. See generally, Rusk & Ball, *Sea Changes and the American Republic*, 9 GA. J. INT'L & COMP. L. 1 (1979); Charney, *Law of the Sea: Breaking the Deadlock*, 55 FOREIGN AFF. 598 (1977).

179. United States Delegation, Report of the Resumed Ninth Session of the Third U.N. Conference on the Law of the Sea, at ii (July 28-Aug. 29, 1980).

180. Law of the Sea Treaty, art. 3.

181. *Id.* art. 17. See *id.* art. 52.

182. *Id.* art. 19, § 2(h).

183. *Id.* art. 21, § 1(f). The coastal state may impose regulations designed to conserve "the living resources of the sea . . .," *id.* art. 21 § 1(d). Such requirements shall not, however, "apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards." *Id.* art. 21 § 2. See *id.* art. 24.

184. *Id.* art. 39, § 2(a).

Freedom of navigation on the high seas also is reaffirmed by the Law of the Sea Treaty.¹⁸⁶ The right of flag states to issue standards regulating the granting of "nationality to ships . . . the registration of ships in its territory, and . . . the right to fly its flag . . ." is limited to the requirement of a "genuine link between the state and the ship."¹⁸⁷ Moreover, the Treaty imposes specific obligations on flag states to insure that ships flying their flags meet minimum safety standards.¹⁸⁸

Throughout the Treaty, the right of coastal states to take such measures "as may be necessary to prevent, mitigate or eliminate grave and immediate danger to their coastlines, or related interests from pollution or threat thereof or from hazardous occurrences . . ." ¹⁸⁹ is explicitly reaffirmed.¹⁹⁰ Further, all states have the obligation, either individually or jointly, to take such measures as are necessary "to prevent, reduce and control pollution from any source . . ." ¹⁹¹ including "[p]ollution from vessels, in particular measures for preventing . . . intentional and unintentional discharges. . ." ¹⁹² States are collectively bound to consummate multilateral negotiations leading to the establishment of "international rules and standards for the prevention, reduction and control of pollution of the marine environment from vessels. . ." ¹⁹³

185. *Id.* art. 39, § 2(b). *See id.* art. 43.

186. *Id.* art. 87, § 1(a).

187. *Id.* art. 91, § 1. *See id.* art. 90. *See also* text accompanying notes 100-116, *supra*.

188. *Id.* art. 94. Specifically, the flag state must impose safety regulations involving:

- (a) The construction, equipment and seaworthiness of ships;
- (b) The manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments;
- (c) The use of signals, the maintenance of communications and the prevention of collisions.

Id. art. 94, § 3. These regulations shall embrace those measures essential to ensure:

- (a) That each ship . . . is surveyed by a qualified surveyor of ships, and has on board such charts, nautical publications and navigational equipment and instruments as are appropriate for the safe navigation of the ship;
- (b) That each ship is in the charge of a master and officers who possess appropriate qualifications, in particular in seamanship, navigation, communications and marine engineering . . . ;
- (c) That [they] are fully conversant with and required to observe the applicable international regulations concerning . . . the prevention of collisions, [and] pollution. . . .

Id. art. 94, § 4.

189. *Id.* art. 142, § 3.

190. *See id.* arts. 145, 211 §§ 4-6, 200. Such measures may include activities beyond the territorial waters of a coastal state where necessary, under circumstances consistent with general principles of international law, and proportionate to the injury threatened, "to protect their coastlines or related interests, including fishing, from pollution or threat of pollution or threat of pollution following upon a maritime casualty. . ." *Id.* art. 221, § 1. The circumstances under which a coastal state may examine a foreign flag vessel are limited. *See id.*, art. 226.

191. *Id.* art. 194, § 1.

192. *Id.* art. 194, § 3(b).

193. *Id.* art. 211, § 1.

V. THE UNILATERAL EFFORTS OF COASTAL STATES

A number of coastal states, having been the victims of dumped oil, have grown dissatisfied with both the traditional flag of convenience doctrine,¹⁹⁴ and the general failure of the world community to achieve agreement on means to resolve the continuing crisis through multilateral conventions. This dissatisfaction has led to the unilateral promulgation of legislation to deal with the problem. The laws of two such nations, the United Kingdom and the United States, will be explored here.

A. *The United Kingdom*

The United Kingdom has enacted a series of statutes dealing with oil pollution, ranging from laws asserting jurisdiction over ships causing pollution to legislation imposing liability for any damage caused. Several of these statutes represent domestic enactments of international conventions, one of which has not yet entered into force internationally.

The Oil in Navigable Waters Act of 1971¹⁹⁵ amended previous acts of 1955 and 1963 to give effect to the amendments to the 1954 International Pollution Convention in the United Kingdom. It further enables the British Government to take action against any ship in its territorial or internal waters, regardless of registry, which has caused an oil pollution casualty.

The Merchant Shipping (Oil Pollution) Act of 1971¹⁹⁶ enacts into British law the International Convention on Civil Liability for Oil Pollution Damage.¹⁹⁷ As mentioned above, the act provides for strict liability and under certain circumstances allows for limitation of liability for oil pollution damage. Such liability is imposed on the owner of the ship, regardless of state of registry; access to British ports is dependent upon compliance with the required certification of adequate insurance coverage.

The Prevention of Oil Pollution Act of 1971¹⁹⁸ is a consolidation of previous Oil in Navigable Waters Acts. It primarily provides jurisdiction over territorial waters to prevent oil pollution, as well as over British ships causing pollution anywhere. Its enforcement mechanisms are carried out by use of oil records, power of inspection, enforcement of applicable conventions, prosecution, and imposition of fines for violations.

Finally, the Merchant Shipping Act of 1974¹⁹⁹ is an enactment of the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. Although this Convention

194. It is ironic that coastal states such as the United States would be dissatisfied with the flag of convenience doctrine, since U.S. tax and labor laws provide a significant economic incentive for U.S. Shipowners to register their vessels abroad. See note 271 *infra*.

195. 1971, ch. 21, 41 HALSBURY'S STATUTES at 1330.

196. 1971, ch. 59, *id.* at 1345.

197. For an analysis of the 1971 act, see Cusine, note 8 *supra*.

198. 1971, ch. 60, 41 HALSBURY'S STATUTES at 1361.

199. 1974, ch. 43, 44 *id.* at 1415 (1974).

has not yet entered into force in the international sphere, it has been implemented in the United Kingdom, and provides compensation from the Fund to any victim of oil pollution damage who is unable to obtain complete recovery from the person liable under the Merchant Shipping (Oil Pollution) Act of 1971.

As can be seen, the legal regime in force in the United Kingdom corresponds very closely to the international framework, and is in the forefront of implementing the most recent international conventions. The statutory scheme allows assertion of jurisdiction in territorial waters over any vessel, regardless of registry, which threatens to cause oil pollution. In addition, a liability scheme has been established which ensures the victim as complete compensation as possible, and places liability on the parties who most fairly should bear it — the ship owner and the owner of the oil cargo.

B. *The United States*

The United States has enacted a substantial body of law to deal with oil pollution in U.S. waters, establishing minimum standards for ships using U.S. ports, jurisdiction over ships in U.S. waters, and liability for pollution damage. This statutory scheme partially embodies existing international conventions, and is in part unilateral.

1. *Early U.S. Legislation*

The first legislation to provide a basis for the regulation of both domestic and foreign ships in United States harbors was enacted by Congress in 1917. This legislation conferred upon the Secretary of the Treasury the power to control "anchorage and movement of any vessel, foreign or domestic, in the territorial waters of the United States" during times of national emergency due to war or threatened war.²⁰⁰ The 1917 legislation was amended in 1950 to place the regulatory power under the President, as well as the Secretary of the Treasury.²⁰¹ Although this act established substantial authority for the control of movement and anchorage of foreign flag vessels in United States waters, it may be invoked only "when

200. Act of June 15, 1917, Pub. L. No. 24, Title I, § 1, 40 Stat. 220 (1917).

Whenever the President by proclamation or Executive order declares a national emergency to exist by reason of actual or threatened war, insurrection, or invasion, or disturbance of international relations of the United States, the Secretary of the Treasury may make, subject to the approval of the President, rules and regulations governing the anchorage and movement of any vessel, foreign or domestic, in the territorial waters of the United States, may inspect such vessel at any time, place guards thereon, and, if necessary in his opinion in order to secure such vessels from damage or injury, or to prevent damage or injury to any harbor or waters of the United States, or to secure the observance of the rights and obligations of the United States, may take, by and with the consent of the President, for such purposes, full possession and control of such vessel and remove therefrom the officers and crew thereof and all other persons not specially authorized by him to go or remain on board thereof.

201. Act of August 9, 1950, 50 U.S.C. § 1 (Supp. IV 1980). A 1979 amendment deletes the Panama Canal Zone from the jurisdiction of the Act. 50 U.S.C. § 191 (Supp. IV 1980).

the national security of the United States is endangered."²⁰² This legislation, therefore, does not provide an adequate basis for the regulation of vessel safety and operations in the normal course of activity.

As a consequence, in 1936 Congress enacted a law governing the inspection of vessels, which for the first time provided a basis for federal safety regulation of the carriage of "inflammable or combustible liquid cargo in bulk."²⁰³ The 1936 act created a "Board of Supervising Inspectors" under the Secretary of Commerce, which was empowered to establish rules and regulations basically concerning the design, construction, alteration and repair of vessels which come within the purview of the act.²⁰⁴

Further, the 1936 act prohibited the carriage of inflammable or combustible cargo, unless the carrying vessel had been issued a "certificate of inspection . . . and . . . a permit has been endorsed on such certificate of inspection by a board of local inspectors, indicating that such vessel is in compliance with the provisions of this section and the rules and regulations established hereunder. . . ."²⁰⁵ Although the 1936 act specifically applied to "all vessels," an express exception was carved out with respect to foreign vessels: "the provision of this subsection shall not apply to vessels of a foreign nation having on board a valid certificate of inspection recognized under law or treaty by the United States. . . ."²⁰⁶ Therefore, this legislation provided no basis for the regulation of foreign vessels.

A second weakness of the 1936 act was in the area of crew certification. The act provided for crew member certification only where "the certificate of inspection does not require at least two licensed officers."²⁰⁷ However, even where crew member certification was mandated, the "number of the crew required to be certificated as tankermen,"²⁰⁸ was entirely left to the discretion of the board of local inspectors. Also, the criteria for certification were ill-defined by the Act, and could be imposed on a discretionary basis by the Board of Supervising Inspectors. Therefore, the 1936 act, while providing a valuable legislative basis for tanker

202. S. REP. No. 2118, 81st Cong., 2d Sess., reprinted in [1950] U.S. CODE CONG. & AD. NEWS 2954, 2954.

203. Act of June 23, 1936, Pub. L. No. 765 § 1, 49 Stat. 1889 (1936) [hereinafter cited as 1936 act].

204. *Id.* § 2:

In order to secure effective provision against the hazards of life and property created by the vessels to which this section applies, the Board of Supervising Inspectors, with the approval of the Secretary of Commerce, shall establish such additional rules and regulations as may be necessary with respect to the design and construction, alteration, or repair of such vessels

205. *Id.* § 4.

206. *Id.* § 1.

207. *Id.* § 4.

208. *Id.* § 6a. "In all cases where the certificate of inspection does not require at least two licensed officers, a board of local inspectors shall enter in the permit issued to any vessel under the provisions of this section the number of the crew required to be certified as tankermen." *Id.*

design and construction requirements, did not establish a sufficient means for the regulation of foreign flag vessels, or the certification of tank ship crew members.

2. *Contemporary U.S. Legislation*

In 1961 Congress promulgated the Oil Pollution Act,²⁰⁹ which implemented the 1954 International Pollution Convention.²¹⁰ The act was amended in 1973²¹¹ to bring into force as to the United States the aforementioned 1969 and 1971 amendments. The only other international convention to be implemented by the United States is the Convention Relating to Intervention on the High Seas,²¹² which has been enacted as the Intervention on the High Seas Act.²¹³

For the purpose of establishing the extent of United States territorial jurisdiction over all ships, the U.S. is a party to the Convention on the Territorial Sea and the Contiguous Zone.²¹⁴ The convention establishes the jurisdiction of a coastal state over its territorial waters,²¹⁵ and the extent of jurisdiction permissible in the contiguous zone,²¹⁶ which is twelve miles from the baseline.²¹⁷ In the case of a ship entering internal waters, the coastal state has "the right to take the necessary steps to prevent any breach of the conditions to which admission of those ships to those waters is subject."²¹⁸ A foreign ship "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."²¹⁹ The convention, therefore, allows a coastal state to enforce its environmental and navigation laws against all ships entering its territorial waters or contiguous zone, regardless of registry. This allows a coastal state to create, in essence, a twelve-mile pollution control zone.²²⁰

The first significant attempt in the United States to promulgate comprehensive legislation concerning tanker safety was the Ports and Waterways Safety Act of 1972.²²¹ Congress recognized the growing dependence

209. 33 U.S.C. §§ 1001-1016 (1976).

210. Note 150 *supra*.

211. Oil Pollution Act Amendments of 1973, Pub. L. No. 93-119, § 1, 87 Stat. 424 (1973) (codified in scattered sections of 33 U.S.C. §§ 1001-1016 (1976)).

212. Note 169 *supra*.

213. 33 U.S.C. §§ 1471-87 (1976).

214. *Done at Geneva*, Apr. 29, 1958, 15 U.S.T. 1607, T.I.A.S. No. 5639. *Entered into force* for the United States on September 10, 1964.

215. *Id.* art. 1.

216. *Id.* art. 24(1).

217. *Id.* art. 24(2).

218. *Id.* art. 16(2).

219. *Id.* art. 17.

220. See Wulf, *Contiguous Zones for Pollution Control: An Appraisal Under International Law*, SEA GRANT TECHNICAL BULLETIN NO. 13 (Univ. of Miami Sea Grant Program 1971).

221. Pub. L. No. 92-340, Titles I and II, 86 Stat. 424 (1972) (prior to the 1978 amend-

of the United States on imported oil, and the increased threat to the environment and risks which would naturally result therefrom.²²³ Hence, the primary emphasis of the 1972 Act was the prevention of pollution rather than compensation or liability. In reviewing the 1972 legislation, Congress concluded that: "Unfortunately, no amount of after-the-fact reporting, liability, and efforts at cleanup will effectively prevent the growing incidence of oil spill tragedies, or restore environmental and ecological resources once destroyed."²²³

The 1972 act was divided into two parts.²²⁴ The first dealt with waterway and port safety, and provided a legislative basis for the regulation of navigable waters, ports, and harbors.²²⁵ The second consisted of an extensive revision of the Tank Vessel Act of 1936.²²⁶ Thus, the 1972 act attacked the problem from two directions: traffic control procedures, and vessel design and construction.²²⁷ This two-pronged approach however, was to prove inadequate, in that it perpetuated one of the principle weaknesses of the Tank Vessel Act of 1936. The 1972 act left virtually unchanged the provision of the 1936 act dealing with crew certification. Additionally, the problem of absence of effective control over foreign vessels remained.

ment) [hereinafter cited as 1972 act].

222. S. REP. No. 92-724, 92d Cong., 2d Sess., reprinted in [1972] U.S. CODE CONG. & AD. NEWS 2766, 2772 [hereinafter cited as S. REP. No. 92-724]:

Other data received indicated that the importation of an incremental 10 to 11 million barrels per day of overseas crude oil and products projected by the National Petroleum Institute by 1985 would require more than 350 tankers, each of 250,000 deadweight tons. In gas, the importation of 4 trillion cubic feet of liquid natural gas annually by 1985 would require the building of 120 tankers each having a maximum capacity of the equivalent of approximately 790,000 barrels.

Even if the foregoing projections prove to be greatly overstated, there is no question that the increase in waterborne movement of oil and hazardous cargoes which will occur has grave implications for the quality of the marine environment and requires positive action now.

223. *Id.* at 2769.

224. Titles I and II, Pub. L. No. 92-340, 86 Stat. 424 (1972).

225. Title I of the 1972 act was captioned "Ports and Waterways Safety and Environmental Quality." Regulations promulgated pursuant to Title I were set forth in 33 C.F.R. §§ 160-62, 164, 165 (1973). Title I was codified in 33 U.S.C. §§ 1221-1227.

226. Title II of the 1972 act was captioned "Vessels Carrying Certain Cargoes in Bulk." Title II was codified at 46 U.S.C. § 391a.

227. S. REP. No. 92-724, *supra* note 222, at 2773.

Although concurring in the need for vessel traffic services, systems and controls contained in H.R. 8140, the committee believed that a comprehensive approach to the prevention of pollution from marine operations and casualties required, in addition, improvement of the vessels themselves: their design, construction, maintenance, and operation. The testimony and data received at the committee's hearings in September made this conclusion inescapable. It is clear that a systems approach to prevention of damage to the marine environment requires not only better control of vessel traffic but an improvement in the vessels themselves.

More recent environmental regulations of the United States regarding pollution control in the territorial sea are quite comprehensive and stringent, and apply to all ships entering U.S. territorial waters, regardless of state of registry. The Deepwater Port Act of 1974²²⁸ concerns the construction, operation, location, and ownership of deepwater ports beyond U.S. territorial limits. The act prohibits the discharge of any oil into the sea from a vessel within the safety zone.²²⁹ A penalty for violation may be assessed against the vessel owner or operator in the amount of \$10,000.²³⁰ In the event of an oil discharge, the owner and operator of the vessel are jointly and severally liable for clean-up costs, without regard to fault, in the amount of the lesser of \$150 per gross ton or \$20 million, unless gross negligence and wilful misconduct with privity of the owner is shown.²³¹ A foreign vessel may not use a deepwater port unless its state of registry has specifically agreed to recognize U.S. jurisdiction over vessels in deepwater ports, and has designated an agent in the U.S. for receipt of service of process in the event of a claim against the vessel or its personnel.²³²

However, the inadequacies of both the 1972 and 1974 acts became painfully apparent after a rash of tanker accidents in U.S. waters and in the coastal waters offshore.²³³ In response to these inadequacies, Congress in 1978 enacted the most comprehensive and far reaching legislation in U.S. history, the Port and Tanker Safety Act.²³⁴ This 1978 act sought to improve on the 1972 act not only in the areas of construction and operations, but also in the areas of personnel qualifications and control over foreign flag vessels.²³⁵ Perhaps the two most significant additions to the

228. 33 U.S.C. §§ 1501-1524 (1976).

229. *Id.* § 1517(a)(1). *See id.* §§ 1502(16), 1509(d)(1).

230. *Id.* § 1517(a)(2).

231. *Id.* § 1517(d).

232. *Id.* § 1518(c).

233. H.R. REP. NO. 95-1384, 95th Cong., 2d Sess. 5, reprinted in [1978] U.S. CODE CONG. & AD. NEWS 3270, 3273 [hereinafter cited as H.R. REP. NO. 95-1384]:

On occasion, proposed regulations have been criticized as weak and ineffective, and the Coast Guard's reluctance to proceed expeditiously has resulted, in at least one occasion, in a law suit by environmental interests to mandate more rapid implementation by the Coast Guard.

This was the overall situation in December of 1976 when a rash of tanker accidents in U.S. waters and in the coastal waters offshore focused public and congressional attention on the problem.

See also Recent Tanker Accidents: Hearings Before the Sen. Comm. on Commerce, 95th Cong., 1st Sess. (1977).

234. Port and Tanker Safety Act of 1978, Pub. L. No. 95-474, 92 Stat. 1471 (to be codified in 33 U.S.C. 1222, -24, -28, -32, and 46 U.S.C. 214 and 391) [hereinafter cited as 1978 act].

235. H.R. REP. NO. 95-1384, *supra* note 233, at 3270-71.

It is obvious that improvements can be made in the supervision and control over all types of vessels, foreign and domestic, operating in the navigable waters of the United States; and in the safety of all tank vessels, foreign and domestic, which transport and transfer oil or other hazardous cargoes in ports

1978 act are its provisions to regulate more effectively both foreign vessels and crew qualifications.

The 1978 act significantly amends Title I of the 1972 act. Under the new amendments, the Secretary of the department in which the Coast Guard is operating (*i.e.* as of the date of this writing, the Department of Transportation) is authorized to issue regulations compelling compliance with the vessel traffic service in each area of operation.²³⁶ Most significant, however, is the inclusion of enforcement provisions which provide for civil and criminal penalties, *in rem* liability, injunction, and withholding of clearance (by the Secretary of the Treasury).²³⁷ The liability provision is included to insure the enforcement of civil penalties so that "the vessel involved shall be liable *in rem* and proceeded against wherever found."²³⁸ In addition to these enforcement powers, the Secretary is also given investigatory powers,²³⁹ and the power to condition entry to ports of the United States.²⁴⁰

Among the important exceptions to these powers, which allow the Secretary to deny entry, is that such denial shall be "subject to recognized principles of international law."²⁴¹ This rather vague limitation is only somewhat clarified by the legislative history. The legislative history of the act specifies *force majeure* as one recognized principle of international law to which the Secretary's power of denial is subject; nevertheless, it leaves open the question of other "recognized principles of international law" which may compel entry, *e.g.* entry in distress.²⁴²

or places subject to the jurisdiction of the United States. Improvements can also be made in the control and monitoring of vessels operating in offshore waters near our coastlines. There is also a demonstrated need for improved personnel qualifications, including improved pilotage standards for the issuance of Federal licenses, as well as realistic manning standards for vessels using our ports.

236. Regulations promulgated under the amended Title I are contained in 33 C.F.R. §§ 160-62, 164 and 165 (1979).

237. 1978 act, § 13.

238. Any vessel subject to the provisions of this chapter, which is used in violation of this chapter, or any regulations issued hereunder, shall be liable *in rem* for any civil penalty assessed pursuant to subsection (a) of this section and may be proceeded against in the United States district court for any district in which such vessel may be found.

Id. § 13(c).

239. *Id.* § 8.

240. *Id.* § 9.

241. *Id.* § 13(e). 33 U.S.C. § 1232(e) sets forth:

Except as provided in section 9, the Secretary may, subject to recognized principles of international law, deny entry into the navigable waters of the United States or to any port or place under the jurisdiction of the United States to any vessel not in compliance with the provisions of this Act or the regulations issued hereunder.

242. H.R. REP. NO. 95-1384, *supra* note 233, at 3285. "[T]he Secretary may deny entry to any vessel not in compliance with the act or regulation, subject to such recognized international principles as *force majeure*." *Id.*

Therefore, even under the present limitation of *force majeure*, query if a tanker, badly damaged in a storm and capable only of making a United States port, could be turned away, regardless of the danger to the harbor or potential of catastrophe. The doctrine of *force majeure* would appear to compel entry in such a situation.²⁴³ A second notable exception, also presumably included in a deference to international law, permits free passage through U.S. territorial waters of vessels originating at and destined to foreign ports.²⁴⁴

243. See Hoff, *Administratrix (United States v. United Mexican States)*, 4 U.N. Rep. Int'l Arb. Awards 444, reported in N. LEECH, C. OLIVER, & J. SWEENEY, *THE INTERNATIONAL LEGAL SYSTEM* 167, 169 (1973).

[T]here appears to be general recognition among the nations of the world of what may doubtless be considered to be an exception, or perhaps it may be said two exceptions, to this general, fundamental rule of subjection to local jurisdiction over vessels in foreign ports.

Recognition has been given to the so-called right of "innocent passage" for vessels through the maritime belt in so far as it forms a part of the high seas for international traffic. Similarly, recognition has also been given — perhaps it may be said in a more concrete and emphatic manner — to the immunity of a ship whose presence in the territorial waters is due to a superior force. The principles with respect to the status of a vessel in "distress" find recognition both in domestic laws and in international law.

But see RESTATEMENT (SECOND) OF FOREIGN RELATIONS LAW § 48 (1965):

(1) A foreign vessel or aircraft has the right to enter the territory of a state when such entry is necessary for the safety of the vessel, aircraft or persons aboard, and to leave the territory once the conditions that made the entry necessary have ceased to exist.

(2) The territorial state may not exercise its jurisdiction under the rule stated in § 20 to enforce rules prescribed by it with respect to

....

(b) the possession or carriage of property aboard a foreign vessel or aircraft entering in distress, bona fide and without intent to evade the customs and antismuggling laws of the coastal state, *except in so far as such regulation may reasonably be necessary for reasons of health or safety of the coastal state* [emphasis supplied].

244. 1978 act § 2(4)(d), 33 U.S.C. § 1223(d):

Except pursuant to international treaty, convention, or agreement, to which the United States is a party, this chapter shall not apply to any foreign vessel that is not destined for, or departing from, a port or place subject to the jurisdiction of the United States and that is in —

- (1) innocent passage through the territorial sea of the United States, or
- (2) transit through the navigable waters of the United States which form a part of an international strait.

See H.R. REP. NO. 95-1384, *supra* note 233, at 3282, which states that:

Subsection (d) exempts from the applicability of the Act any foreign vessel in innocent passage through the territorial sea of the United States or any foreign vessel in transit through navigable waters of the United States which form a part of an international strait, unless that vessel is destined for or departing from a port or place subject to the jurisdiction of the United States. This exemption of foreign vessels is consistent with international law and may, of course, be lifted pursuant to any international treaty, convention, or agreement to which the United States is a party and by which the flag state of the vessel involved is bound.

The significance of these two exceptions will largely depend upon the volume of tanker traffic plying the waters off the coast of the United States, but not destined for any United States port. The development of Mexican oil may well result in a significant increase in traffic of this nature, which passes through United States waters (*e.g.*, destined for Europe), endangering valuable environmental and ocean resources, yet which is nevertheless exempted from the reach of this legislation. This would appear to be an instance where the national interests of the United States are so great as to warrant some degree of regulation even of innocent passage through United States territorial waters.

The 1978 act also significantly amends Title II of the 1972 act. The importance of this part of the 1978 act is in its recognition of the inadequacy of existing international standards, and willingness to unilaterally enact stricter standards.²⁴⁵ The Secretary has been given broad power to issue, amend, or repeal regulations relating,²⁴⁶ *inter alia* to:

- (i) superstructures, hulls, cargo holds or tanks, fittings, equipment, appliances, propulsion machinery, auxiliary machinery, and boilers;
- (ii) the handling or stowage of cargo, the manner of such handling or stowage of cargo, and the machinery and appliances used in such handling or stowage;
- (iii) equipment and appliances for lifesaving, fire protection, and prevention and mitigation of damage to the marine environment;
- (iv) the manning of such vessels and the duties, qualifications, and training of the officers and crew thereof . . . ;
- (v) improvements in vessel maneuvering and stopping ability and other features which reduce the possibility of collision, grounding, or

245. To the extent feasible, the committee elected to endorse standards internationally agreed to. However, it declined to await the ratification of any international agreement on this subject and established specific dates on which certain standards would go into effect, whether or not there is a final convention in force at the time of such effective dates. Furthermore, the committee indicated its concern that the international conference chose not to require certain modifications of existing vessels which it would require for certain new vessels. . . .

The Committee has elected to impose additional requirements on all U.S. vessels beyond those which, present indications are, would be imposed by international agreement. It makes the same additional requirements applicable to foreign vessels which elect to operate within the navigable waters of the United States.

Id. at 3289-90.

Actually, this concept is analogous to the domestic transportation concept of the "land bridge exemption," which exempts from U.S. economic regulation surface movements in foreign commerce which have both an origin and destination outside the territory of the United States. See Dempsey, *The Contemporary Evolution of Intermodal and International Transport Regulation Under the Interstate Commerce Act: Land, Sea and Air Coordination of Foreign Commerce Movements*, 10 VAND. J. TRANSNAT'L L. 505, 513-18 (1977); Dempsey, *Foreign Commerce Regulation Under the Interstate Commerce Act: Intermodal Coordination of International Transportation in the United States*, 5 SYR. J. INT'L L. & COM. 53, 66-71 (1977).

246. H.R. REP. NO. 95-1384, *supra* note 233, at 3289-90. See note 225 *supra*.

other accidents;

(vi) the reduction of cargo loss in the event of a collision, grounding, or other accident; and

(vii) the reduction or elimination of discharges during ballasting, deballasting, tank cleaning, cargo handling, or other such activity.²⁴⁷

In addition to the regulations which may be issued by the Secretary, minimum standards are also established under the 1978 act. These standards place specific requirements on "vessels between 20,000 and 40,000 deadweight tons which reach an age of 15 years by January 1, 1985,"²⁴⁸ new tank vessels,²⁴⁹ and self-propelled vessels.²⁵⁰

Other provisions of the 1978 act require certification of compliance and establish personnel and manning standards for both U.S. and foreign vessels.²⁵¹ Thus, the 1978 act establishes "a procedure whereby the Secre-

247. 1978 act § 5(6)(A), 46 U.S.C. § 391a(6)(A). Regulations promulgated pursuant to this section are contained in volume 46 of the Code of Federal Regulations.

248. H.R. REP. No. 95-1384, *supra* note 233, at 3290.

249. Under the 1978 act § 5(7)(K), 46 U.S.C. § 391a(7)(K), a vessel complies with minimum U.S. standards,

- (K) if a new tanker of 10,000 gross tons or above, be equipped with —
- (i) two remote steering gear control systems operable separately from the navigating bridge; . . .
 - (ii) main steering gear control in the steering compartment;
 - (iii) means of communications and rudder angle indicators on the navigating bridge, remote steering gear control station, and the steering gear compartment;
 - (iv) two or more identical and adequate power units for the main steering gear;
 - (v) an alternative and adequate power supply, either from an emergency source of electrical power or from another source of power located in the steering gear compartment; and
 - (vi) means of automatic starting and stopping of power units with attendant alarms at all steering stations.

250. Additionally, the 1978 act § 5(7)(J), 46 U.S.C. § 391a(7)(J), sets forth the following minimum standards:

- (J) if of 10,000 gross tons or above, not later than June 1, 1979, [a vessel] be equipped with —
- (i) a dual radar system, with short-range and with long-range capabilities and each with true-north features;
 - (ii) an electric relative motion analyser, which is at least functionally equivalent to such equipment complying specifications established by the United States Maritime Administration;
 - (iii) an electronic position fixing device;
 - (iv) adequate communications equipment;
 - (v) a sonic depth finder;
 - (vi) a gyrocompass; and
 - (vii) up-to-date charts:

Provided, That the effective date of compliance with the requirement of clause (ii) shall be July 1, 1982 or such earlier date as agreed to internationally and accepted by the United States.

251. Subsection 8 of Section 5 requires certificates of compliance for both United States and foreign vessels. Subsections 9 and 10 establish personnel and manning standards for United States and foreign vessels respectively. Subsection 10(B) provides that:

tary can be assured that foreign crews on foreign flag tankers do not constitute an unacceptable threat to U.S. waters and the marine environment."²⁵² The act provides for enforcement,²⁵³ and establishes a national program of inspection to insure compliance.²⁵⁴ Finally, in an attempt to decrease nontraumatic sources of oil pollution, the 1978 act imposes controls on lightering,²⁵⁵ and prohibits the "discharge of tank washings by dumping at sea." These two final provisions are of tremendous importance considering the large amount of pollution which results solely from normal tanker operations.²⁵⁶

A final area which remains to be examined is the possibility of state regulation where federal regulation is found to be wanting. In *Ray v. Atlantic Richfield Co.*,²⁵⁷ the Supreme Court held unconstitutional sections of the Washington tanker law, which placed size limitations and operating restrictions on tankers entering Puget Sound. The Court essentially held those provisions of the state legislation invalid which interfered with a "uniform national rule," such as those regarding design, construction, and size limitations. The Court, however, upheld provisions requiring tug escorts, and to some extent, local pilotage.

Any foreign vessel having on board oil or hazardous materials in bulk as cargo or in residue shall have a special number of personnel certificated as tankermen, or equivalent, as may be required by the Secretary, when the vessel transfers oil or hazardous materials in any port or place to the jurisdiction of the United States; and such requirement shall be noted in applicable terminal operating procedures. No transfer operations may take place unless the crew member in charge is capable of clearly understanding instructions in English.

Id., § 5(10)(B), 46 U.S.C. § 391a(10)(B).

252. H.R. REP. No. 95-1384, *supra* note 233, at 3294.

253. 1978 act, § 13.

254. As is explained in the legislative history;

With respect to foreign flag vessels, the procedures would be similar and consistent with existing procedures, except that a foreign-issued certificate would not be automatically accepted as adequate. The Secretary would be required to examine the vessel and may, as a basis for the issuance of a certificate of compliance, accept in whole or in part a foreign-issued certificate.

H.R. REP. No. 95-1384, *supra* note 233, at 3296.

255. *Id.* at 3297-98:

This subsection provides new legislative authority for the control of lightering operations; that is, the practice of transferring cargoes at sea from large deep-draft vessels to shallow-draft vessels for subsequent transfer to shoreside terminals, a practice which has proliferated due to the inability of the larger tankers to enter our shallow ports. It prohibits a tanker from unloading any cargo of oil or hazardous material at any port or terminal under the jurisdiction of the United States, unless such cargo has been transferred in accordance with any lightering regulations that have been promulgated by the Secretary.

256. S. REP. 92-724, *supra* note 222, at 2779. "Even more important than accidental spills, is pollution occurring from the normal, everyday operation of tankers, primarily from deballasting operations and tank flushing. According to the Environmental Protection Agency, this accounts for 11 percent of the total oil pollution of the sea." *Id.*

257. 435 U.S. 151 (1978). For a discussion of this case, see Note, *Oil Spills — State Prevention and the Possibility of Pre-Emption*, 30 MERCER L. REV. 559 (1979); Note, *Oil Tanker Regulation: A State or Federal Area?* 19 NAT. RESOURCES J. 701 (1979).

The 1978 act contains two provisions with respect to state law. The first permits states to impose more stringent safety standards than those imposed by the federal government.²⁵⁸ The second allows the Secretary to license pilots under circumstances where the relevant state government has not imposed licensing requirements.²⁵⁹ It must be borne in mind that vessels under 10,000 tons are not required to be equipped with electronic devices designed to prevent collisions from occurring.²⁶⁰ The 1978 act has left the States with the freedom to impose more stringent safety standards. The states, therefore, must independently evaluate the safety standards and requirements imposed under the 1978 act.

Turning to the issue of carrier liability, the United States has not ratified the International Convention on Civil Liability for Oil Pollution Damage, which contains provisions for civil liability for oil pollution, as well as for limitation of liability. The overall scheme is extremely complex and confusing to apply, largely because of the fine line that must be trod with regard to federal-state jurisdiction. While a detailed discussion of liability provisions is beyond the scope of this article, it is necessary to mention the federal acts that are applicable. The act which has been in existence for the longest period of time, and still survives in some form, is the Limitation of Liability Act.²⁶¹ The scope of its application has been somewhat narrowed by the Water Pollution Control Act.²⁶²

Part of the difficulty in the regulation of oil pollution lies in the concurrent competence of both the federal statutory scheme and that of the individual coastal states. Coastal states are allowed to implement and enforce pollution control regulations in their territorial waters,²⁶³ but in areas where there exists a uniform federal policy, the coastal states may not enact any conflicting legislation.²⁶⁴ There may be some hope for clarification of the current confusion should the Comprehensive Oil Pollution

258. 1978 act § 2(6)(b), 33 U.S.C. § 1225(b), which provides: "Nothing contained in this section, with respect to structures, prohibits a State or political subdivision thereof, from prescribing higher safety equipment requirements or safety standards than those which may be prescribed by regulations hereunder."

259. *Id.* § 2 (7), 33 U.S.C. § 1226, which provides:

The Secretary may require federally licensed pilots on any self-propelled vessel, foreign or domestic, engaged in the foreign trade, when operating in the navigable waters of the United States in areas and under circumstances where a pilot is not otherwise required by State law. Any such requirement shall be terminated when the State having jurisdiction over the area involved establishes a requirement for a State licensed pilot and has so notified the Secretary.

260. 1978 act, § 5(7)(k).

261. For further analysis of the complexity of liability for oil pollution, see Sisson, *Oil Pollution Law and the Limitation of Liability Act: A Murky Sea for Claimants Against Vessels*, 9 J. MAR. L. & COMM. 285 (1978); Post, *Private Compensation for Injuries Sustained by the Discharge of Oil from Vessels on the Navigable Waters of the United States*, SEA GRANT TECHNICAL BULLETIN No. 22 (Univ. of Miami Sea Grant Program 1972).

262. 46 U.S.C. §§ 181-96 (1976).

263. 33 U.S.C. §§ 1251-1376 (1976).

264. *Askew v. American Waterways Operators, Inc.*, 411 U.S. 325 (1973).

Liability and Compensation Act²⁶⁵ be consummated.

VI. CONCLUSION

The conduct of the United States Government in the area of international environmental and transportation law relating to oil tankers deserves no applause from the world community. Paradoxically, U.S. labor and tax interests have created an economic regime which frequently makes it imprudent for U.S. vessel owners to register their ships domestically unless subsidized by U.S. taxpayers.²⁶⁶ U.S. commercial interests, coupled with the demands of sovereign equality by flag states, have insured that the flag of convenience option remains a viable alternative to U.S. tax and labor encroachments on the profit margin.²⁶⁷ United States military and environmental interests have assured that only the most modern fleet of tankers will fly the U.S. flag²⁶⁸ and serve U.S. ports,²⁶⁹ while the rusty hulks of aged U.S.-owned vessels will be scattered throughout the rest of the world to serve foreign ports and pollute foreign seas.²⁷⁰ At the same time the United States refuses to cooperate with the world community in ratifying many of the major multilateral conventions now pending before it.²⁷¹ From a global perspective, such preoccupation with domestic interests is reprehensible.

While such conduct is not desirable, it may be understood as a logical response to an international legal regime whose rules were developed at a time when significant pollution by ocean vessels neither existed nor was

265. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978).

266. See *Sisson*, *supra* note 261, at 338-41.

267. Actually, because the flag of convenience option is available, such labor and tax laws are self-defeating. They create economic incentives for shipowners to register their vessels outside the United States. Only vessels which transport commodities or passengers between points in the United States are precluded from utilizing the flag of convenience option. See 46 U.S.C. § 883 (1976). See generally *Dempsey, Legal and Economic Incentives for Foreign Direct Investment in the Southeastern United States*, 9 *VAND. J. TRANSNAT'L L.* 247, 254 (1976). Thus, it is for the federal government to relax its tax burden and labor regulations on maritime vessels so as to encourage additional U.S. registry.

268. See notes 62, 63, 66-83 *supra* and accompanying text.

269. See notes 85-86 *supra* and accompanying text.

270. See notes 247-50 *supra* and accompanying text.

271. The United States unquestionably has developed a body of law that effectively copes with the problems of oil pollution by tankers which serve its ports, and which corresponds with the existing international framework. However, U.S. policy, as evidenced by its overall statutory scheme, may be viewed as being unduly exploitive of the existing international system. On the one hand, the United States promotes the use of flag of convenience registry by U.S. vessel owners by virtue of its strict registration and taxation laws. However, U.S. environmental and pollution laws, which have been enacted independently from international conventions, ensure that only the newest ships with the highest construction standards serve U.S. ports. Assuming that it is advantageous for a shipowner to serve U.S. ports and to maintain a vessel that meets American standards, U.S. law may have a beneficial effect on world shipping standards and the reduction of oil pollution. Nevertheless, it is submitted that the United States should implement this policy in cooperation with the international community, rather than enacting its own laws so to ensure that substandard ships, many of which may be U.S.-owned, serve other ports.

contemplated. One could argue that as a result of significantly changed circumstances in which the ecological balance in our oceans and coastal tidewaters is seriously threatened, and in which a continuation of the contemporary trend could lead to disastrous consequences for both marine life and man, the customary notion of flags of convenience should no longer be given determinative weight. Such archaic notions of national sovereignty over ships which fortuitously happen to be registered in a state with which they have absurdly little in common must be rendered subordinate to the legitimate interests of both coastal states and the international community in protecting a fragile and seriously threatened marine environment.

The law appears to be evolving in a way which rejects this challenge to our existence. Flag states are losing significant elements of their sovereignty when their vessels enter a coastal state's territorial waters. Coastal states are now unilaterally imposing their own notions of safety as obligations upon vessels which serve their ports.²⁷² Moreover, it may be desirable to further limit the exclusive sovereignty that flag states assert in such a way as to confine it to freedom of navigation, vesting jurisdiction over safety and environmental pollution in the international community.²⁷³ The concept of a "genuine link," if it is to be employed, should be carefully and clearly defined to require a significant nexus between the flag state and its registrants (*e.g.*, a requirement of fifty-one percent ownership by resident nationals of the flag state as a condition precedent to registration). Perhaps coastal and flag states could resolve their difference

272. In terms of regulation of oil pollution in territorial waters, and providing liability for pollution damage, both the United Kingdom and the United States have enacted comprehensive and effective statutory schemes. The United Kingdom has traditionally acted in cooperation with the international community, being among the first countries to ratify the 1954 Pollution Convention and the 1971 Compensation Fund Convention. Collectively, the international conventions drafted by IMCO provide an effective means of dealing with all aspects of oil pollution on the basis of international cooperation, and the United Kingdom, as one of the major maritime nations, has consistently put them into force.

The United States, on the other hand, has only ratified two international conventions, although it has developed a substantial body of law unilaterally. As another of the major maritime nations, this lack of participation in the international community is unfortunate.

The United States can and should be an active participant in the international maritime community, and should ratify such agreements as the 1973 International Convention for the Prevention of Pollution from Ships, and the 1971 International Convention Establishing an International Fund for Compensation of Oil Pollution Damage. Ratification of these conventions would serve to further both U.S. and international interests.

273. The existing international framework for dealing with oil pollution has largely eliminated the problems created by extensive use of flags of convenience. Since coastal states are allowed to assert jurisdiction over any vessel in their territorial waters to prevent pollution, the issue of a ship's nationality has become essentially irrelevant. The existing international conventions which provide for enforcement by the flag state are not effective for sanctioning flag of convenience vessels which violate international conventions. However, the conventions which allow the coastal state to take any necessary enforcement measures will minimize this problem, if and when they enter into force.

through the vehicle of the multilateral conventions proposed by IMCO.²⁷⁴ But having witnessed (and contributed to) the failure of the most promising of these proposals to secure sufficient assent to enter into force, coastal states, notably the United States, have been compelled to act, albeit unilaterally.²⁷⁵

The U.S. Port and Tanker Safety Act of 1978 is a step in the right direction.²⁷⁶ It defines clear and fairly stringent safety standards for vessels of any flag serving U.S. ports.²⁷⁷ This legislation, however, is only the attempt of one nation to deal with a problem which is by definition multinational. Nevertheless, so long as the industrial world is addicted to the herion of oil, perhaps the best that can be done is to develop every avenue of regulation available, at all levels (state, national, and international), so as to reduce the risks associated with tanker operation to the lowest level economically and technologically feasible.²⁷⁸

Perhaps only a combined multilevel regime can effectively deter continued environmental pollution by maritime vessels. Customary principles of international law do not now permit coastal states to regulate oil spillage by foreign flag vessels at points beyond their territorial waters. Thus, unilateral coastal state legislation, alone, may be unable to prohibit intentional pollution on the high seas. Multilateral efforts, such as those drafted by IMCO, will continue to be the principal means of deterring oil pollution beyond the territorial waters of a coastal state. These are efforts which the United States should enthusiastically embrace. Further, it may be desirable for IMCO to become more than a mere *consultative* organization. Perhaps it should be permitted to evolve into an international organization with the authority to issue binding, mandatory rules over environmental pollution and safety of maritime vessels.

The problem of maritime pollution is sufficiently severe that these efforts, both unilateral and multilateral, should have teeth; they should impose strong sanctions on intentional dumping at sea, including both

274. It appears that the most effective method of minimizing oil pollution on the high seas lies in enforcing high construction and safety standards in territorial waters and ports by coastal states. A vessel that must have a double hull, segregated ballast tanks, a highly trained crew, etc. will be less likely to cause an accident on the high seas and will not cause pollution by its routine operations. The effectiveness of this enforcement mechanism is, of course, dependent on the economic considerations involved in improving tanker construction and refurbishing old tankers. Nevertheless, it is a solution that may become increasingly effective over the course of time.

275. See notes 234-60 *supra* and accompanying text.

276. The one major loophole of this legislation exempts from its provisions those vessels traveling through U.S. territorial waters but originating at and destined for foreign ports. See note 244 *supra*, and accompanying text. Although this exemption comports with customary international legal notions of free passage, it nevertheless may result in coastal state injury. See Rusk & Ball, *Sea Changes and the American Republic*, 9 GA. J. INT'L & COMP. L. 1 (1979).

277. See Anderson, *supra* note 52, at 985. This article discusses international efforts to prevent traumatic source oil tanker pollution.

278. But see note 256 *supra* and accompanying text.

finer and imprisonment. Companies which are repeated offenders should be prohibited from engaging in ocean trade. Corporate veils should be pierced to insure that both vessel owners and the oil companies which own the cargo are held jointly and severally liable, indeed, strictly liable, for the costs of cleanup and reimbursement to the affected fishing and tourist industries. Insurance rates are likely to rise dramatically for unsafe vessels and notoriously unsafe operators. This will give both oil companies and ocean shipping companies a pecuniary incentive to employ the safest ocean vessels with highly trained crews.

Certainly, the ultimate consumer of imported oil will pay the price of such stringent regulation, but the ecological benefits to be realized therefrom may well be worth the price. These increases will fuel inflation, but they will decrease in a small way domestic demand for imported fuel, thereby ultimately reducing growth in oil importation and, hence, sailing frequencies. Fewer ships at sea or a reduction in volume shipped will, again in a small way, reduce the likelihood and impact of collision. Every drop of oil which we keep out of our oceans is one which will not injure the fragile maritime environment. Not only does international environmental policy dictate that we prevent oil from entering the oceans of our planet, but with our collective contemporary awareness of both the cost and the relative scarcity of fossil fuels, and the burdens imposed by such excessive dependence upon foreign energy sources, U.S. energy policy requires that we do so as well.

