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Does the Emperor Have no Clothes? Enforcement of International Laws Protecting the Marine Environment

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DOES THE EMPEROR HAVE NO CLOTHES? ENFORCEMENT OF INTERNATIONAL LAWS PROTECTING THE MARINE ENVIRONMENT

David S. Ardia*

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INTRODUCTION

Environmental regulations cannot end at state borders. Because ecosystems, individual species, and pollution do not respect political boundaries, there is a growing necessity for international environmental

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agreements.¹ However, to implement effective environmental agreements, States must confront several problems specific to the international environmental arena. First, international environmental agreements often require extensive monitoring over large geographic areas. Second, international environmental agreements require the political will and legal apparatus to ensure the compliance of disparate actors. Finally, States must be prepared to enforce international commitments beyond their individual territorial borders.²

The area of the planet's surface that is covered by ocean is immense.³ In fact, there are over twice as many square miles of ocean as there are surface land.⁴ To put this vastness in perspective, driftnet fishing in the northern Pacific alone encompasses an area the size of the United States.⁵ Because fishing and whaling boats generally operate unobserved in international waters, there is little scientific information on the impact of fishing and whaling on the marine ecosystem.⁶ Indeed, the

1. The recent dispute between Canada and the United States over migrating salmon illustrates this necessity. On July 19, 1997, a flotilla of Canadian fishing boats blockaded an Alaskan ferry from leaving port in Prince Rupert, British Columbia. Almost one hundred Canadian fishermen claimed that Americans were taking more than five hundred thousand sockeye salmon as they swam through Alaskan waters on their way south to Canada to spawn. See Timothy Egan, *Salmon War in Northwest Spurs Wish for Good Fences*, N.Y. TIMES, Sept. 12, 1997, at A26. After three days of intense negotiations, the ferry was permitted to depart. Anthony DePalma, *Canadians End Blockade in Salmon-Fishing Dispute*, N.Y. TIMES, July 22, 1997, at A6. For a discussion of fishing agreements involving Canada and the United States, see *infra* Part IV.

2. The term "enforcement" is used broadly, encompassing both voluntary and involuntary mechanisms for ensuring compliance. In environmental law, the ultimate aim is the protection of the environment; accordingly, as used here the paramount purpose of enforcement is to obtain compliance before violations occur.

3. Oceans cover approximately 71% or 360 million square kilometers of the Earth's surface and contain 97% of the planet's free water. DAVID J. BRIGGS & PETER SMITHSON, *FUNDAMENTALS OF PHYSICAL GEOGRAPHY* 231, 243 (1986). The average depth of the world's oceans is about 3.9 kilometers; maximum depths can exceed eleven kilometers. *Id.* at 231-32.

4. The distribution of ocean basins and continents is unevenly arranged over the earth's surface. ARTHUR N. STRAHLER, *INTRODUCTION TO PHYSICAL GEOGRAPHY* 48 (3d ed. 1973). In the northern hemisphere the ratio of land to ocean is about 1 to 1.5. The ratio of land to ocean in the Southern Hemisphere is 1 to 4. *Id.*; see also BRIGGS & SMITHSON, *supra* note 3.

5. William T. Burke, *Driftnets and Nodules: Where Goes the United States?*, 21 OCEAN DEV. & INT'L L. 237, 239 (1990).

6. The extent of past violations of international marine laws is staggering. For example, recent information from a former scientist with the former Soviet Fisheries Ministry reveals that between 1948 and 1973, the Soviet Union actually killed 48,477 humpback whales, not the 2,710 kills officially reported to the International Whaling Commission. David Hearst, *Soviet Files Hid Systematic Slaughter of World Whale Herds*, THE GAZETTE (Montreal), Feb. 12, 1994, at D9. See also *infra* notes 113-122 and accompanying text. Stephen Palumbi, an expert on fisheries science, has remarked: "The ocean is a big, big place, and when you're out of sight of land, no one will know what you do." Natalie Angier, *DNA*

oceans may be the only truly "international" area on the planet, representing an expanse beyond the territorial boundaries of all nations.⁷

Historically, customary international law has provided that a sovereign state has jurisdiction to prescribe and enforce its laws only within its territorial borders. Nevertheless, because a large portion of the Earth's surface is "open ocean,"⁸ there is plainly a need for the rule of law to extend beyond traditional state borders. Various problems arise, however, when a nation projects its laws extraterritorially. For example, the United States, like other countries, has often asserted an expansive view of the "extraterritorial reach of law,"⁹ but these assertions of extraterritorial jurisdiction have occasionally resulted in conflicts with the laws or policies of other nations.¹⁰

The oceans present many unique challenges to the conservation of living resources. Remarkably, there is a general paucity of scholars and commentators that have addressed the problems associated with the

Tests Find Meat of Endangered Whales for Sale in Japan, N.Y. TIMES, Sept. 13, 1994, at C4 (quoting Professor Stephen Palumbi of the University of Hawaii).

7. The idea that the oceans are the common property of all can be traced to the Dutch philosopher Hugo de Groot (Grotius) in the early 17th century. JAMES B. MORRELL, *THE LAW OF THE SEA: AN HISTORICAL ANALYSIS OF THE 1982 TREATY AND ITS REJECTION BY THE UNITED STATES* 2 (1992); see also Derrick M. Kedziora, *Gunboat Diplomacy in the Northwest Atlantic: The 1995 Canada-EU Fishing Dispute and the United Nations Agreement on Straddling and Highly Migratory Fish Stocks*, 17 NW. J. INT'L L. & BUS. 1132, 1134 (1997). In 1609, Grotius published a pamphlet entitled *Mare Liberum*, in which he argued:

The sea can in no way become the private property of any one, because nature not only allows but enjoins its common use. . . . Nature does not give a right to anybody to appropriate such things as may inoffensively be used by everybody and are inexhaustible, and therefore, sufficient for all.

MORRELL, *supra*, at 2.

8. This article will use "open ocean" and "high seas" synonymously. These terms designate an area defined by the United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, U.N. Doc. A/Conf.62/122, 21 I.L.M. 1261 [hereinafter 1982 LOS Convention]. Under the 1982 LOS Convention, which is discussed in detail *infra* in Part IV.B, a coastal state has jurisdiction over marine resources not only in its internal waters and territorial sea (see *id.* at Art. 3, 21 I.L.M. at 1272) but also within its Exclusive Economic Zone (EEZ) which extends up to a maximum of two hundred nautical miles from a state's shore. *Id.* at art. 57, 21 I.L.M. at 1280. Accordingly, the "high seas" are defined as: "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic state." *Id.* at art. 86, 21 I.L.M. at 1286.

9. See *infra* notes 74-84 and accompanying text.

10. See, e.g., Gary B. Born, *A Reappraisal of the Extraterritorial Reach of U.S. Law*, 24 LAW & POL'Y INT'L BUS. 1, 67 (1992) ("The readiness of the United States to apply its laws extraterritorially in post-War years provoked vigorous protests from affected foreign states and private enterprises."); A.V. Lowe, *Blocking Extraterritorial Jurisdiction, The British Protection of Trading Interests Act, 1980*, 75 AM. J. INT'L L. 257 (1981); Najeeb Samie, *Extraterritorial Enforcement of United States Antitrust Laws: The British Reaction*, 16 INT'L LAW. 313, 314 (1982).

protection of the marine environment, particularly the role that monitoring and enforcement play in international environmental regimes.¹¹ Those that have lamented the dearth of monitoring and enforcement mechanisms in international environmental agreements have often failed to offer a comprehensive solution.¹²

This article examines existing structures and mechanisms for the enforcement of international environmental laws, particularly international laws that must confront violations on the high seas in order to protect marine organisms.¹³ Although the tenor of the present analysis is general, many of the most influential international marine agreements to date are highlighted, including the Third United Nations Conference on the Law of the Sea,¹⁴ the Convention on Future Multilateral Co-Operation

11. Although few commentators and scholars have examined the role that monitoring and enforcement play in the protection of the environment, particularly the marine environment, the issue appears to be receiving increased attention. See, e.g., Steven M. Anderson, *Reforming International Institutions to Improve Global Environmental Relations, Agreement, and Treaty Enforcement*, 18 HASTINGS INT'L & COMP. L. REV. 771 (1995); David D. Caron, *The International Whaling Commission and The North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT'L L. 154 (1995); *Developments in the Law—International Environmental Law: IV. Assent to and Enforcement of International Environmental Agreements*, 104 HARV. L. REV. 1487, 1550 (1991) [hereinafter *Assent and Enforcement*]; Christopher C. Joyner, *Recommended Measures Under the Antarctic Treaty: Hardening Compliance with Soft International Law* 19 MICH. J. INT'L L. 401 (1998); Mary Ellen O'Connell, *Enforcement and the Success of International Environmental Law*, 3 IND. J. GLOBAL LEGAL STUD. 47 (1995); Kal Raustiala, *International "Enforcement Of Enforcement" Under the North American Agreement on Environmental Cooperation*, 36 VA. J. INT'L L. 721 (1996); Ibrahim F. I. Shihata, *Implementation, Enforcement, and Compliance With International Environmental Agreements—Practical Suggestions in Light of the World Bank's Experience*, 9 GEO. INT'L ENVTL. L. REV. 37 (1996); Andrew Watson Samaan, *Enforcement of International Environmental Treaties: An Analysis*, 5 FORDHAM ENVTL. L.J. 261, 270 (1993).

12. A small number of scholars, however, have offered comprehensive solutions. See, e.g., Anderson, *supra* note 11; O'Connell, *supra* note 11; Samaan, *supra* note 11; Shihata, *supra* note 11; Catherine Tinker, *Environmental Planet Management by the United Nations: An Idea Whose Time Has Not Yet Come?*, 22 N.Y.U. J. INT'L L. & POL. 793 (1990).

13. The primary focus of this article is on the biotic components of the marine environment, particularly the conservation of fish and mammal populations. However, in recognition of the connections between the biotic and abiotic components of the marine system, some aspects of pollution control are also addressed. The reasons for this focus stem from both the author's personal interest and from the fact that, unlike the paucity of scholarship on mammal and fish conservation, there is considerable scholarship addressing international marine pollution. See, e.g., David Driesen, *The Congressional Role in International Environmental Law and its Implications for Statutory Interpretation*, 19 B.C. ENVTL. AFF. L. REV. 287 (1991); David A. Ring, *Sustainability Dynamics: Land-Based Marine Pollution and Development Priorities in the Island States of the Commonwealth Caribbean*, 22 COLUM. J. ENVTL. L. 65 (1997); ROBERT A. SHINN, *THE INTERNATIONAL POLITICS OF MARINE POLLUTION CONTROL* (1974); Michael Twigg, *Marine Species Protection and Pollution Prevention*, 7 GEO. INT'L ENVTL. L. REV. 869 (1995).

14. Draft Final Act of the Third United Nations Conference on the Law of the Sea, Oct. 21, 1982, U.N. Doc. A/Conf.62/121, 21 I.L.M 1245.

in the Northwest Atlantic Fisheries,¹⁵ and the United Nations Agreement on the Conservation and Management of Straddling Fish Stock and Highly Migratory Fish Stock.¹⁶

Part I discusses the need for, and development of, international environmental laws protecting the marine environment. Part II outlines many of the problems inherent in the enforcement of international environmental agreements generally, and the additional problems of extraterritorial enforcement on the high seas. Part III highlights the critical role that monitoring plays as the basis for an effective international environmental regime and discusses the difficulty of monitoring compliance over large spatial scales. Part IV canvasses and critiques current enforcement structures and mechanisms in international environmental agreements protecting the marine environment. Finally, Part V argues that existing compliance mechanisms are insufficient to protect the marine environment and proposes a new apparatus that utilizes non-governmental organizations as an aid in monitoring and compliance under the auspices of an international compliance and monitoring agency.¹⁷

15. Convention on Future Multilateral Co-operation in the Northwest Atlantic Fisheries, *opened for signature* Oct. 24, 1978, art. II(1), 1979 Canada Treaty Series No. 11, 3-4 (1979) [hereinafter NAFO Convention].

16. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, 6th Sess., U.N. Doc. A/Conf.164/37 (1995), 34 I.L.M. 1542 (1995) [hereinafter Migratory Fish Stocks Agreement].

Other agreements analyzed in some depth include the International Convention for the Regulation of Whaling, Dec. 2, 1946, 62 Stat. 1716, T.I.A.S. No. 1849, 161 U.N.T.S. 74 [hereinafter ICRW]; the Convention to Prohibit Driftnet Fishing in the South Pacific, *opened for signature* Nov. 29, 1989, 29 I.L.M. 1449 (1990); the International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952, T.I.A.S. No. 2786, 4 U.S.T. 380; and the U.N. General Assembly Resolution establishing a moratorium on high seas driftnet fishing, *see* G.A. Res. 44/225, Dec. 22, 1989, 29 I.L.M. 1555 (1990).

17. The creation of an international compliance and monitoring agency may be particularly timely in light of current reform efforts at the United Nations. Recently, Secretary General Kofi Annan optimistically stated to the UN General Assembly:

Indeed, let this be known as the "reform Assembly." Let it be remembered as the time when all of us joined forces and seized the opportunities created by the new era to revitalize our United Nations—this unique and universal instrument for concerted action in pursuit of the betterment of humankind.

September 22, 1997 Statement to the U.N. General Assembly, *reprinted in* M2 PRESSWIRE, Sept. 23, 1997. Of course, not all responses have been positive. *See generally* Robert H. Reid, *U.S. Reform Proposal Has U.N. In Turmoil*, SEATTLE TIMES, Sept. 26, 1997, at A15 (discussing controversy surrounding proposal to add new permanent members to the Security Council). For a more scholarly analysis of potential UN reforms, *see* David Bills, *International Human Rights and Humanitarian Intervention: The Ramifications of Reform on the United Nations' Security Council*, 31 TEX. INT'L L.J. 107 (1996); Tobi P. Dress, *Goals of the*

I. THE NEED FOR INTERNATIONAL ENVIRONMENTAL LAWS PROTECTING THE MARINE ENVIRONMENT

Ecosystems and individual species do not respect political boundaries. Consequently, international environmental agreements are needed.¹⁸ To rely solely on the patchwork of national environmental regulations would be both ineffective and inefficient.¹⁹ First, reliance on national environmental initiatives is *ineffective* because most environmental problems have transboundary characteristics.²⁰ In addition, many environmental harms are spatially and temporally

United Nations Decade of International Law: Law Reform and National Programs, 87 AM. SOC'Y INT'L L. PROC. 357 (1993).

18. See, e.g., Cyrille de Klemm & Clare Shine, *BIOLOGICAL DIVERSITY CONSERVATION AND THE LAW: LEGAL MECHANISMS FOR CONSERVING SPECIES AND ECOSYSTEMS* 73 (1993) (IUCN Environmental Policy and Law Paper No. 29) [hereinafter IUCN Paper]. The environment obviously obeys no jurisdictional limitations:

Jurisdictional separations, whether functional or territorial but particularly the latter, obey no ecological or biological logic. They are mostly political or administrative. The effect of dividing populations and habitats by artificial jurisdictional boundaries is often to make the rational conservation and management of wild species very difficult.

Id. at 73. See Developments in the Law—International Environmental Law, *V. Institutional Arrangements*, 104 HARV. L. REV. 1580, 1580 (1991) [hereinafter *Institutional Arrangements*] (“States have recognized these problems as matters of living standards, security, and even survival, and there is broad agreement that international action is the best, if not the only, means to address them.”); Tolba, *Building an Environmental Institutional Framework for the Future*, 17 ENVTL. CONSERVATION 105, 107 (1990).

19. See generally *Assent and Enforcement*, *supra* note 11.

20. This argument takes two forms. First, environmental issues are never purely local because of the interconnectedness of the biosphere. See, e.g., P.G. Kurup, *Environmental Protection Act: A Scientist's View*, 11 COCHIN U.L. REV. 12, 13 (1987) (“The earth, as a whole, has one atmosphere. The global atmosphere cannot be divided into Indian, American or Russian.”). See generally Linda A. Malone, *The Chernobyl Accident: A Case Study in International Law Regulating State Responsibility for Transboundary Nuclear Pollution*, 12 COLUM. J. ENVTL. L. 203 (1987). Second, environmental issues are never purely local because of the interconnectedness of global commerce. As one U.S. government official has remarked in the antitrust context:

Perhaps a strict territorial view of jurisdiction might have made sense when American antitrust was in its infancy, but both times and the law have changed. Technological innovation has almost literally made the world smaller, facilitating transportation and communication which expand beyond imagination the possibility of world trade. The multinational corporation and other new areas of business organization have tied the world into a largely interdependent economy.

John H. Shenfield, Address Before the American Bar Association, Section of International Law (Aug. 9, 1978), in MARIAN LLOYD NASH, *DIGEST OF UNITED STATES PRACTICE IN INTERNATIONAL LAW* 1345–46 (1978). In the environmental context, for example, pesticides that have been banned in the United States but sold abroad can return on food imports. See Karen A. Goldberg, Comment, *Efforts to Prevent Misuse of Pesticides Exported to Developing Countries: Progressing Beyond Regulation and Notification*, 12 ECOLOGY L.Q. 1025, 1028–29 (1985).

diffuse.²¹ Therefore, the impacts on individual states may not be sufficient to justify unilateral action.²²

Second, reliance solely on national environmental regulation is *inefficient*. Due to the operation of competitive international markets, the existence of less protective environmental regimes may undermine the willingness of a State to enact comparatively stricter environmental standards.²³ For example, “[g]lobal environmental resources, such as rain forests, that lie within the territory of a state that provides little environmental protection may be unnecessarily squandered; meanwhile, increased environmental protection in one country may simply drive polluting industries to other nations.”²⁴ In the end, because resource

21. See Garret Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243, 1245 (1968). In addition:

[S]erious environmental harms, such as the ozone hole or degradation of the Chesapeake Bay, often arise from many small, seemingly safe uses of property that only together cause great harm. Environmental protection began with judge-make law, but shifted to legislative statutes long ago precisely because courts have difficulty recognizing and regulating such diffuse sources of harm.

Timothy D. Searchinger, *Private Property Rights and Environmental Harm*, EDF Letter (A Report to Members of the Environmental Defense Fund), Oct. 1992, at 4 (quoted in David S. Ardia, *Dolan v. City of Tigard: Takings Doctrine Moves onto Unpaved Ground*, 24 *REAL ESTATE L.J.* 195, 232 (1996)).

Finally, because environmental benefits and harms span generations, traditional cost-benefit analysis undervalues environmental initiatives. See Page, *Economics of a Throwaway Society; The One-Way Economy*, in *ECONOMICS AND RESOURCES POLICY* 74, 78–82 (J. Butlin ed., 1981); see also Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 *ECOLOGY L.Q.* 495, 516–19 (1984).

22. See *Assent and Enforcement*, *supra* note 11, at 1550–51 (“[S]tates may underestimate environmental problems and conclude that negotiating or assenting to agreements is too costly.”); cf. Jeff L. Lewin, *Boomer and The American Law of Nuisance, Past, Present, and Future*, 54 *ALB. L. REV.* 189, 229–30 (1990) (“[N]uisance law could not adequately respond to the problems of air and water pollution. Informational, procedural, and financial barriers would preclude many affected parties from bringing suit against pervasive nuisances with widespread impact on the general public health and welfare.”).

23. See generally *Developments in the Law—International Environmental Law: VI. Extraterritorial Environmental Regulation*, 104 *HARV. L. REV.* 1609 (1991) [hereinafter *Extraterritorial Regulation*].

24. *Assent and Enforcement*, *supra* note 11, at 1550. But see Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 *YALE L.J.* 2039 (1993). Professor Stewart argues:

The empirical studies on productivity, trade, and industrial location are broadly consistent with one another. They show that national differences in environmental regulation have had an important impact at the margin in the case of a relatively few “dirty” industries. There is also evidence of a more general shift in the location of heavy industrial and chemical facilities and trade advantage in those sectors to developing countries. . . . [However,] the studies do not show that environmental requirements are a dominant factor in overall international competitiveness.

Id. at 2084 (footnotes omitted).

extractors subject to stricter environmental regulation will have higher costs than their counterparts in a country with weaker regulations, domestic political pressure to relax standards may result in a race to the bottom of the "environmental ladder."²⁵

Nevertheless, prior to 1972, members of the United Nations passed few international environmental agreements.²⁶ In 1972, members signed a declaration committing the United Nations to environmental issues.²⁷ The international community has subsequently enacted a number of multilateral and bilateral conventions that deal with environmental issues; 162 multilateral treaties and protocols on the environment are listed in the United Nations Environment Programme's 1993 register,²⁸ an increase from 102 in 1980.²⁹

However, the sheer number of environmental agreements masks a disturbing situation. Few international environmental agreements contain substantive commitments by the parties.³⁰ Furthermore, in the few

25. See *Extraterritorial Regulation*, *supra* note 23, at 1617; see also Raymond J. Kopp et al., *Comparing environmental regulation in the OECD countries*, RESOURCES, Fall 1990, at 10, 13 (positing that strict U.S. hazardous waste standards may reduce U.S. competitiveness); Sanchez, *Health and Environmental Risks of the Maquiladora in Mexicali*, 30 NAT. RESOURCES J. 163, 185 (1990) (observing that many U.S. firms have fled California to take advantage of the relaxed environmental standards in Mexico).

26. See Jennifer K. Rankin, Note, *U.S. Laws in the Rainforest: Can a U.S. Court Find Liability for Extraterritorial Pollution Caused by a U.S. Corporation? An Analysis of Aguinda v. Texaco, Inc.*, 18 B.C. INT'L & COMP. L. REV. 221 (1995); An important exception during this period is the International Convention for the Regulation of Whaling signed in 1946. See *infra* Part IV.

27. Report of the United Nations Conference on the Human Environment, Stockholm, June 5-16, 1972, 27th Sess., U.N. Doc. A/Conf. 48/14 (1972).

28. U.N. Environment Programme, Register of International Treaties and Other Agreements in the Field of the Environment, U.N. Doc. UNEP/GC15/INF4 (1993).

29. U.N. Environment Programme, Register of International Treaties and Other Agreements in the Field of the Environment, U.N. Doc. UNEP/GC/INFORMATION/11/Rev. 1 (1985) (listing 140 multilateral treaties and protocols on the environment). See also ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW 482-90 app. B (Edith Brown Weiss ed., 1992) (finding that from 1972 to 1979 at least 35 treaties were signed); THE MARINE MAMMAL COMMISSION COMPENDIUM OF SELECTED TREATIES, INTERNATIONAL AGREEMENTS, AND OTHER RELEVANT DOCUMENTS ON MARINE RESOURCES, WILDLIFE, AND THE ENVIRONMENT (Richard L. Wallace ed., 1994).

30. For example, the recent United Nations Convention on Biological Diversity contains lofty objectives, yet postpones for further consideration the issues of liability and redress for activities affecting the marine environment. United Nations Convention on Biological Diversity, *opened for signature* June 5, 1992, 31 I.L.M. 818 (1992) [hereinafter Biodiversity Convention]. As one commentator has remarked:

There is no specific language in the Biodiversity Convention's text to obligate parties to bear the costs of avoiding activities that might threaten or damage biodiversity in marine ecosystems. Moreover, the Biodiversity Convention does not obligate a party either to avoid or minimize threats or damage to biodiversity beyond the limits of its national jurisdiction (i.e., on the high seas). . . . The Convention's failure to include these provisions is especially regrettable because it

agreements that contain substantive commitments there is a startling absence of monitoring and enforcement mechanisms.³¹ International cooperation in the areas of monitoring and enforcement is crucial in order to make the formation of environmental laws and subsequent rights meaningful.³² The lack of a "centralized supranational regulatory authority," moreover, is often cited as the critical barrier to effective environmental protection.³³ For example, in preparation for the 1972 United Nations' Stockholm Conference, then UN Secretary General U. Thant proposed a new "global authority,"³⁴ "a legislative body capable of establishing binding standards . . . and an enforcement authority with power to make conclusive determinations as to compliance."³⁵

The acute need for an effective monitoring and enforcement regime is particularly compelling in the context of the marine environment. The world's oceans are important to many nations for purposes as diverse as commerce, transportation, minerals, food, survival, and, more recently, as a repository for human pollution and waste.³⁶ Recent research

deprives the instrument of the regulatory means necessary to control parties whose nationals violate norms associated with the preservation of marine biodiversity.

Christopher C. Joyner, *Biodiversity in the Marine Environment: Resource Implications for the Law of the Sea*, 28 VAND. J. TRANSNAT'L L. 635, 650 (1995) [hereinafter Joyner, *Biodiversity*].

31. See Samaan, *supra* note 11, at 270 ("What little international environmental law exists is often ineffective because of the absence of enforcement mechanisms."); see also *Extraterritorial Regulation*, *supra* note 23, at 1609 ("The body of customary norms and international agreements that comprise the public international legal system do not provide comprehensive environmental protection."); Joyner, *Biodiversity*, *supra* note 30, at 686 ("the preeminent critical factor remains implementation and enforcement"); see also discussion *infra* in Part IV.

32. See, e.g., R.D. MUNRO & J.G. LAMMERS, ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES AND RECOMMENDATIONS (1987); Joyner, *Biodiversity*, *supra* note 30, at 686 ("There is a critical need for prudent international planning and coordinated management that will insure the continued vitality and survival of these valuable marine ecosystems."). See also discussion *infra* Parts III and IV.

33. See, e.g., Gray, *The U.N. Development Programme: An Assessment*, 20 ENVTL. L. 291, 317-18 (1990); Greenberg, *IMCO: An Environmentalist's Perspective*, 8 CASE W. RES. J. INT'L L. 131, 144 (1976); *Institutional Arrangements*, *supra* note 18, at 1590; Tolba, *supra* note 18, at 109.

34. 8 PUBLIC PAPERS OF THE SECRETARIES-GENERAL OF THE UNITED NATIONS 350 (A. Cordier & M. Hartelson eds., 1977).

35. Chayes, *International Institutions for the Environment*, in LAW, INSTITUTIONS, AND THE GLOBAL ENVIRONMENT 1, 2 (J. Hargrove ed., 1972) (paraphrasing U. Thant).

36. Although income generated from fishing comprises only a small portion of the global economy, fishing is oftentimes the lifeblood of coastal and island regions. In South-east Asia, more than five million people fish full time, contributing approximately \$6.6 billion towards the region's economy. Peter Weber, *Protecting Oceanic Fisheries and Jobs*, in STATE OF THE WORLD 1995, at 23 (citing Mohd Ibrahim Hj Mohamed, *National Management of Malaysian Fisheries*, MARINE POLICY, January 1991, at 2-14). In northern Chile, fishing accounted for 40 percent of income, 18,000 jobs, and \$400 million worth of exports in 1990. *Id.* at 23 (citing Leslie Crawford, *Chile No Longer has Plenty More Fish in the Sea*,

suggests that the oceans contain animal life that rivals tropical forests in its diversity of species.³⁷ As Professor G. Carlton Ray of the Department of Environmental Sciences at the University of Virginia writes, “the coastal zone may be the single most important portion of our planet. The loss of its biodiversity may have repercussions far beyond our worst fears.”³⁸

Although conflict between nations over the navigational use of the oceans dates back thousands of years, conflict over the ocean’s natural resources is a relatively recent phenomenon. Historically, the biotic and abiotic resources found beyond the coastlines and an approximately two to three mile “territorial zone” were considered common property.³⁹ However, humankind’s bucolic relationship with the sea is changing—or at least our perception of the ocean’s abundance is becoming more tempered. Current conflicts between human resource needs and the marine environment are largely an outgrowth of the industrialization of modern fishing and whaling practices.⁴⁰ Once perceived as boundless, the marine environment is now seen as limited and fragile. “What one nation does

FINANCIAL TIMES, July 19, 1991). In Iceland, fishing accounts for 17 percent of the national income and 12–13 percent of employment. *Id.* at 23.

37. For example, of the world’s seventy-one phyla, forty-three (61%) are marine organisms, while only twenty-eight are land organisms. G. CARLTON RAY, *Ecological Diversity in Coastal Zones and Oceans*, in BIODIVERSITY 38–39 (E.O. Wilson ed., 1988).

38. *Id.* at 48.

39. See Robert B. Krueger & Myron H. Nordquist, *The Evolution of the 200-Mile Exclusive Economic Zone: State Practice in the Pacific Basin*, 19 VA. J. INT’L L. 321, 322 (1979). Hugo Grotius relied on the idea of an inexhaustible resource as the basis of his concept of *mare liberum*, stating that, “[t]he sea can in no way become the private property of any one Nature does not give a right to anybody to appropriate such things as may inoffensively be used by everybody and are *inexhaustible*, and therefore, sufficient for all.” MORRELL, *supra* note 7, at 2, quoting HUGO GROTIUS, *THE FREEDOM OF THE SEAS* (Ralph van Deman Magoffin trans., Oxford Univ. Press 1916) (1633) (emphasis added).

40. See generally CHARLES A.S. HALL ET AL., *ENERGY & RESOURCE QUALITY: THE ECOLOGY OF THE ECONOMIC PROCESS*, 437–446 (1992) stating:

Modern fossil fuel-intensive fisheries in Europe evolved from the steam tugs that once pulled wind-powered fishing boats out of North Sea ports during calm weather. . . . From these relatively humble beginnings evolved today’s modern fishing fleet, which is very capital and energy intensive. Commercial fishing is normally done with nets, dredges, or traps of some kind or with long strings of baited fishhooks. Fossil energy is used to build gear and boats, travel to and from fishing grounds, tow nets, and preserve the catch. Many high seas fishing boats weigh about the same when they leave port as when they return, the weight of fuel used being roughly equal to the weight of fish brought back.

Id. at 437. See also Christopher C. Joyner, *Ocean Fisheries, U.S. Interests, and the 1982 Law of the Sea Convention*, 7 GEO. INT’L ENVTL. L. REV. 749, 749–50 (1995) [hereinafter Joyner, *The 1982 LOS Convention*] (“Rapid advancement in detection technologies and fishing techniques—especially remote sensing, satellite imaging, monofilament driftnets, purse seining, and long line fisheries—has meant increasingly efficient exploitation of the living resources of the seas.”).

in its exploitation of the high seas has consequences that impact every other nation that utilizes marine resources."⁴¹

What is happening in the world's oceans is startling. The over-exploitation of marine organisms has "led to accelerated quantitative, genetic, and social disruptions of numerous fish, shellfish, turtle, and mammal species."⁴² For example, overfishing (and a change in weather patterns) decimated the anchovy fishery off Peru in the 1960s⁴³ and nearly depleted the cod and mackerel stocks in the Southern Ocean.⁴⁴ This over-exploitation extends to most species and to all regions of the world's oceans.⁴⁵ In fact, modern whaling has brought many species to the brink of extinction.⁴⁶ By 1930, nearly 30,000 blue whales were being killed each year, and it is estimated that 330,000 had been killed by 1966.⁴⁷ Current estimates place the population of North Atlantic right whales at no more than 300 individuals.⁴⁸ Before whale hunting began,

41. Jane Kathryn Jenkins, *International Regulation of Driftnet Fishing: The Role of Environmental Activism and Leverage Diplomacy*, 4 IND. INT'L & COMP. L. REV. 197, 198-99 (1993).

42. Joyner, *Biodiversity*, *supra* note 30, at 642. A July 19, 1996 report from the Fisheries and Agriculture Organization to the Secretary General of the United Nations summarized the present situation as follows:

Conservation and management of fisheries resources worldwide is generally in a poor state. There have been no major improvements in the situation since FAO reported in the early 1990s that approximately 70 per cent of the world's marine capture fisheries for which data were available were fully exploited, over-exploited or in a state of recovery.

Report of the Secretary General, 51st Sess., Agenda Item 24(b), at 6, U.N. Doc. A/51/383 (1996).

43. See Boyce Thorne-Miller & John G. Catena, *THE LIVING OCEAN: UNDERSTANDING AND PROTECTING MARINE BIODIVERSITY* 20 (1991).

44. See Karl-Hermann Kock, *Fishing and Conservation in Southern Waters*, 30 POLAR RECORD 12-14 (1994).

45. In the Bering Sea alone, nearly two hundred California gray whales were killed by Russian whalers in 1991. SEA SHEPHERD LOG, Autumn 1991, at 1 (on file with author). Every night, Japanese, Korean, and Taiwanese boats place 35,000 miles of drift net, forty miles long and thirty feet deep, entangling and suffocating an estimated 150,000 sea mammals (including dolphins, whales, and seals) and a million seabirds each year. Charles Bowden, *At Sea with the Shepherd*, BUZZWORM, Mar.-Apr. 1991, at 38, 41. See discussion *infra* note 113 and accompanying text. In addition, the three top sealing nations (Canada, Russia, and Norway) killed 135,000 seals in 1991 alone. BUZZWORM, *supra*, at 41.

46. "[T]he history of whaling has seen overfishing of one area after another and of one species of whale after another to such a degree that it is essential to protect all species of whales from further overfishing." International Convention for the Regulation of Whaling, Preamble, Dec. 2, 1946, T.I.A.S. No. 1849, 161 U.N.T.S. 72, 74.

47. GEOFFREY LEAN ET AL., *ATLAS OF THE ENVIRONMENT* 161 (1990).

48. Eric Niiler, *Population of Right Whales Up Slightly*, PATRIOT LEDGER, Oct. 30, 1996, at *1, available in 1996 WL 8061870; see also *New Data Shows Whale Populations Critically Low, Says World Wildlife Fund*, BUS. WIRE, June 12, 1989, available in 1989 WL BW190 [hereinafter *Whaling Populations*] (estimating the population of blue whales at 200 to 1,100 individuals).

the finback whale population was believed to be 500,000; recent reports estimate that only 4,000 finback whales are alive in the Southern Hemisphere.⁴⁹

The problems of over-exploitation are exacerbated by the fact that most domestic and international environmental laws lack effective mechanisms to monitor and enforce protections, particularly on the "high seas" where the oceans are common territory outside the jurisdiction of any particular State. This is a classic manifestation of Garrett Hardin's famous tale of *The Tragedy of the Commons*: "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society which believes in the freedom of the commons. Freedom in a commons brings ruin to all."⁵⁰

II. THE ENFORCEMENT OF ENVIRONMENTAL AGREEMENTS

It is an axiomatic principle of international law that sovereign states may bind themselves through international agreements. Furthermore, the central precept of *pacta sunt servanda* requires that States obey their international commitments in good faith.⁵¹ However, by committing to an international regulatory regime a State necessarily relinquishes some of its inherent sovereignty. As expected, sovereignty is often an agonizing possession for a State to give up. "States often vigorously defend their sovereignty because they consider their physical integrity and political identity as important elements in their foreign policies."⁵²

A. The Enforcement Of Environmental Agreements Generally

The tension between state sovereignty and the need for international environmental initiatives is often a significant barrier to both

49. *Whaling Populations*, *supra* note 48. As blue whales became scarce, whalers moved their sights to finback whales; in the 1950s, whalers killed finbacks. LEAN ET AL., *supra* note 47, at 161. In the 1960s the preferred prey was sei whales; in the 1970s, it was minke whales. *Id.* at 161. By 1975 an estimated 1.5 million whales had been killed through whaling. *Id.* at 161.

50. Garret Hardin, *The Tragedy of the Commons*, reprinted in ECONOMICS, ECOLOGY, AND ETHICS 104 (H. Daly ed., 1973); see also Cyrille de Klemm, *Migratory Species in International Law*, 29 NAT. RESOURCES J. 935, 938 (1989) ("Conversely, where no State has sovereign rights, that is to say in the high seas, animals become international *res nullius* that anybody may exploit, over-exploit or destroy as he pleases. This latter principle is embodied in international law under the name of freedom of fishing in the high seas.").

51. See Vienna Convention on the Law of Treaties, May 23, 1969, art. 26, 1155 U.N.T.S. 331, 339 ("Every treaty in force is binding upon the parties to it and must be performed by them in good faith.").

52. Samaan, *supra* note 11, at 271 (citing KENNETH N. WALTZ, THEORY OF INTERNATIONAL POLITICS (1979)).

environmental enforcement and to the creation of international environmental agreements in the first place. Although the capacity to unilaterally withdraw, either legally⁵³ or clandestinely, may increase the likelihood that a State will agree to an international norm, this power can seriously undermine the enforcement and effectiveness of environmental initiatives.⁵⁴ In addition, States will often require as a condition of their ratification that the collective action of multiple parties be required to implement and enforce the agreement. Inevitably, these "international bureaucracies" further increase the opportunities for unilateral withdrawal.⁵⁵ It should thus not be surprising that there is a growing number of unenforced, uncoordinated international environmental agreements.⁵⁶

53. The ability of a party state to "opt out" or withdraw is a common provision in environmental treaties. See, e.g., ICROW, *supra* note 16, at art. 5; Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries, art. 12(2)(b), available in Int'l Env'tl. L., WL 154036 (1981) (outlining opt-out provisions); Protocol Amending Convention on Fishing and Conservation of Living Resources in the Baltic Sea and the Belts to Provide for EEC Membership, Nov. 11, 1982, art. XI(4)(a)-(b), 22 I.L.M. 704 (clarifying opt out provisions of the 1973 Gdansk Convention); Vienna Convention for the Protection of the Ozone Layer, Mar. 22 1985, T.I.A.S. No. 11097; Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, art. 19, 26 I.L.M. 1550. See generally ELLEN HEY, *THE REGIME FOR THE EXPLOITATION OF TRANSBOUNDARY MARINE FISHERIES RESOURCES* 225-30 (1989) (discussing the structure, organization and opt-out procedures of the International Convention for the Conservation of Atlantic Tunas).

54. The primary argument against "opt out" provisions rests on the need for uniformity, an essential component of environmental regimes. See generally Eric J. Pan, *Authoritative Interpretation of Agreements: Developing More Responsive International Administrative Regimes*, 38 HARV. INT'L L.J. 503 (1997). Pan argues that:

The opt-out system is an unrealistic mechanism because it undermines a regime's goal of developing regulatory uniformity. It forces the contracting parties effectively to become members of separate agreements because over time, as parties exercise their right to opt out of various amendments, different parties will end up having different legal obligations to the regime.

Id. at 509 (citation omitted). See also *Institutional Arrangements*, *supra* note 18, at 1608 ("opt-out procedures may jeopardize the overall effectiveness of a standard: depending on the topic, regulations can be undermined if a small minority of states with disproportional impact on the issue opts out"); *Assent and Enforcement*, *supra* note 11, at 1553 ("International law and international agreements . . . are undermined if states withdraw clandestinely."); Colin W. Clark, *Economic Biases Against Sustainable Development*, in *ECOLOGICAL ECONOMICS: THE SCIENCE AND MANAGEMENT OF SUSTAINABILITY* 319, 328 (R. Costanza ed., 1991) ("For the quota system to succeed it must be rigorously enforced, since cheating on quotas would be highly profitable."). See also *infra* notes 108-113 discussing the detrimental effects of unilateral withdrawal.

55. See Samaan, *supra* note 11, at 271 ("Since states are sovereign and are free to choose as they will, they often rely on collective action to implement and monitor treaties. This further increases the chances of unilateral withdrawal.").

56. See Anderson, *supra* note 11, at 776-77, 805 ("[M]any of the agreements signed in recent years have not been effectively implemented or enforced."); see also Joyner, *The 1982 LOS Convention*, *supra* note 40, at 762 n.46 ("The chief conservation and management

Because most multilateral environmental agreements are only morally binding, the success of each agreement depends upon the willingness of countries to abide by the provisions they have agreed to and to enforce compliance among their citizens.⁵⁷ Thus, the effectiveness of international environmental initiatives hinges on voluntary compliance; governments determine for themselves whether they are in compliance.⁵⁸ Whether as a result of changing domestic politics or economic conditions, treaty commitments can become burdensome on party states. Inevitably, when a particular commitment becomes contrary to a State's interests—either sociopolitical or economic—it is less likely that the commitment will be honored.⁵⁹

In light of such compelling reasons to strengthen international monitoring and enforcement regimes, why has the international community failed to act? The failure can be attributed to a number of factors. First, "positivist notions of international law require that states be bound only when they have given their express or tacit consent to be the subject of an international right or obligation."⁶⁰ As previously noted, state sovereignty must necessarily prevail over the needs of the international community even where that sovereignty puts the world community at risk or is contrary to a clear majority of the world's citizens.⁶¹

problem associated with highly migratory species is the lack of enforceable regulatory bodies.").

57. The willingness of a party state to implement its international obligations is by no means assured. See Michael S. Giaino, *Deforestation in Brazil: Domestic Political Imperative—Global Ecological Disaster*, 18 ENVTL. L. 537 (1988). Shihata notes:

Contrary to theoretical assumptions . . . states do not take all rules of international law with the same degree of seriousness, either in their adoption or in their implementation. Treaties that entail financial obligations or that relate to the state's territory are discussed with utmost care by the officials concerned in all relevant ministries and are often subject to parliamentary approval. Once they are approved, these treaties are usually honored in practice. By contrast, multilateral conventions concerning the environment, much like human rights conventions, have been left in many countries to foreign affairs officials who may be more concerned with the public image of their state if it questioned or rejected the rules, rather than about the actual prospects of their application.

Shihata, *supra* note 11, at 39.

58. See Sanford E. Gaines, *Global and Regional Perspectives on International Environmental Protection*, 19 Hous. J. INT'L L. 983, 997-98 (1997) ("With weak international administrative capacity, the effectiveness of the regime depends on the capacity of each of the participating governments to implement and enforce the appropriate domestic measures to give effect to the agreement."); Samaan, *supra* note 11, at 273.

59. For an extensive discussion of past violations of international marine agreements, see *infra* notes 104-122 and accompanying text.

60. Anderson, *supra* note 11, at 778.

61. See Phillippe J. Sands, *The Environment, Community and International Law*, 30 HARV. INT'L L.J. 393, 399 (1989) ("Until international law moves away from the view that

Second, international agreements ordinarily go through demanding domestic ratification processes and, because many are not self-executing, require domestic implementing legislation before they can be enforced.⁶² Even treaties that are considered self-executing often require tacit domestic approval in order to obtain the funding required for implementation.⁶³ Furthermore, the act of signing a treaty entails little actual obligation on the signatory state; not only does signing a treaty fail to obligate the State, in many instances it does not even require a signatory state to undertake its own ratification process or to deposit a ratified treaty with the appropriate international body.⁶⁴ Many States that sign international environmental agreements either fail to enact any implementing legislation or "draft ill-conceived and poorly structured domestic legislation,"⁶⁵ leaving the agreements as virtual "dead letters."⁶⁶

Third, most international environmental regimes are structurally incapable of providing the necessary monitoring and enforcement mechanisms. Indeed, "international environmental treaties often lack domestic enforcement mechanisms precisely because environmental agreements are put into effect by secretariats, international organizations, and other international bodies that lack 'international

international society comprises a community of states, and comes to encompass the persons (both legal and natural) within those states, it will not be able to provide even the most elementary framework for the protection of the environment.").

62. FREDERIC L. KIRGIS, JR., *INTERNATIONAL ORGANIZATIONS IN THEIR LEGAL SETTING* 280 (2d ed. 1993). In the United States, for example, the U.S. Constitution provides that the President has power to make treaties only "by and with the Advice and Consent of the Senate. . . ." U.S. CONST. art. II, § 2, cl. 2.

63. See Roger W. Findley, *The Incorporation of International Environmental Treaty Law into National Law in a Federal System: Problems, Obstacles and Solutions*, in *DROIT DE L'ENVIRONNEMENT ET DÉVELOPPEMENT DURABLE* 25, 30-31 (1994).

64. For example, Kirgis found that:

There is normally no obligation on governments . . . to submit signed conventions to any domestic approval or ratification process. (Thus, in the case of the United States, there would normally be no international obligation to submit such a . . . convention to the Senate for its advice and consent or to Congress for legislative approval). Moreover, even if such a convention is approved by the domestic process, the state is not normally under any international obligation to ratify it. That is, it does not have to take the final step of signifying to the other signatories or parties its intention to be bound. If it does not ratify such a convention, it is not bound by it.

KIRGIS, *supra* note 62, at 280.

65. Anderson, *supra* note 11, at 778.

66. Andronico O. Adede, *Lessons from Twenty Years of International Law-making in the Field of the Environment 1972-1992*, in *A LAW FOR THE ENVIRONMENT* 11, 16 (Alexandre Kiss & Francoise Burhenne-Guilmin eds., 1994). See Shihata, *supra* note 11, at 39.

jurisdiction.’”⁶⁷ Most environmental agreements establish an organizational structure consisting of a plenary body of representatives from each signatory country, a smaller body that meets in order to perform treaty functions, and a secretariat.⁶⁸ The majority of the monitoring and enforcement work logically falls on the treaty secretariat who is typically responsible for implementation.⁶⁹ However, “[i]mplementing and enforcing international environmental treaties is especially burdensome for secretariats because their duties are not always precisely defined, budgets are limited, and many treaties are not self-executing.”⁷⁰ Consequently, many secretariats cannot effectively implement their own treaties without substantial assistance from other international organizations and from party states themselves.⁷¹

Finally, many countries, particularly developing countries, lack the financial and technological capacity to meaningfully enforce environmental regulations.⁷² Add to this financial constraint the inevitable

67. Anderson, *supra* note 11, at 779. See also Findley, *supra* note 63, at 25; cf. Anthony Clark Arend, *The United Nations and the New World Order*, 81 GEO. L.J. 491, 496–97 (1993) (discussing jurisdiction of the UN Security Council).

68. See KIRGIS, *supra* note 62, at 274–75. For example, the International Maritime Organization (IMO) contains an Assembly, Council and Secretariat. The Council is composed of sixteen contracting parties—twelve selected by their interest in providing international shipping services and four elected by nations interested in using international shipping services. See KENNETH R. SIMMONDS, *THE INTERNATIONAL MARITIME ORGANIZATION* 5–9 (1994). Other environmental agreements that utilize this organizational structure include the Vienna Convention for the Protection of the Ozone Layer, UNEP Doc. IG.53/5, 26 I.L.M. 1529 (1987); the International Convention for the Regulation of Whaling, *supra* note 16; the Convention on Future Multilateral Co-operation in the Northwest Atlantic Fisheries, *opened for signature* Oct. 24, 1978, art. II(1), Canada Treaty Series No. 11, 3–4 (1979).

69. KIRGIS, *supra* note 62, at 274–75. Secretariats, however, are frequently not capable of performing their assigned tasks:

Conventions’ secretariats are seen by many as more technical, less political, and less bureaucratic than full-fledged international organizations. Nonetheless, they lack the capacity to enforce the conventions’ obligations. Even their power to verify implementation is limited and can be hampered in the absence of the parties’ cooperation, especially in view of the fragmentation of state institutions dealing with environmental issues and the large number of enterprises affecting the environment.

Shihata, *supra* note 11, at 42–43.

70. Anderson, *supra* note 11, at 780.

71. See Anderson, *supra* note 11, at 780–81. Secretariats frequently interact with United Nations agencies such as the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP); Samaan, *supra* note 11, at 261–70; Shihata, *supra* note 11, at 42–43. See Geoffrey Palmer, *New Ways to Make International Environmental Law*, 86 AM. J. INT’L L. 259, 259–61 (1992).

72. See, e.g., Karen A. Goldberg, Comment, *Efforts to Prevent Misuse of Pesticides Exported to Developing Countries: Progressing Beyond Regulation and Notification*, 12 ECOLOGY L.Q. 1025, 1030 (1985) (“The entire staff of a ministry of agriculture in a developing country may consist of only one or two people with ‘nothing but a motorcycle and no fuel.’”) (quoting an interview with L. Caltagirone, Professor of Entomology at the Center for

political pressure that will come from domestic firms adversely affected by the actual implementation and enforcement of the regulations, and there often exists a strong incentive for governments to devote ever diminishing resources to monitoring and enforcement activities.⁷³

B. Problems Associated with Extraterritorial Enforcement

Extraterritorial jurisdiction is a form of jurisdiction under which one sovereign claims the right to regulate activities outside its sovereign boundaries.⁷⁴ Not surprisingly, States are often reluctant to extend their power beyond their recognized international borders.⁷⁵ This is not to say, however, that States are powerless beyond their sovereign borders. Since World War II, the United States, like other countries,⁷⁶ has often asserted an expansive view of the "extraterritorial reach of law." Examples include the application of U.S. export control laws to foreign

Biological Control, University of California, Berkeley and Advisor to USAID in Central America (May 11, 1984)); Brad Knickerbocker, *World Opens Eyes to Environment*, CHRISTIAN SCI. MONITOR, Mar. 23, 1990, at 6 (noting that "India's environmental agency has just two lawyers to track lawbreakers"); T.M. Sen, *Environment Planning for Industry in the Developing Countries*, 11 INT'L BUS. LAW. 55, 55-56 (1983) (comparing the relative effectiveness of different countries' regulatory agencies).

73. See, e.g., R. Jaganmohan Rao & Sumitra, *A Critique of the Environment Act*, 11 COCHIN U.L. REV. 18, 25, 31-32 (1987) (noting that although India's new environmental protection legislation is strict in certain respects, the government failed to delegate enforcement to an effective agency).

74. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 402 (1987). Extraterritorial jurisdiction is typically divided into legislative (or prescriptive jurisdiction), judicial jurisdiction, and enforcement jurisdiction. Legislative jurisdiction is a nation's power "to make its law applicable to the activities, relations or status of persons." *Id.* § 401(a). Judicial jurisdiction is commonly described as a nation's authority "to subject persons or things to the process of its courts or administrative tribunals." *Id.* § 401(b). Finally, enforcement jurisdiction is defined as a State's power "to induce or compel compliance . . . with its laws or regulations." *Id.* § 401(c).

75. A recent example is the Cuban Liberty and Democratic Solidarity (Libertad) Act of 1996, more commonly referred to as the Helms-Burton Act, which was signed into law by President Clinton on March 12, 1996. As a result of vocal opposition from U.S. allies, President Clinton has been reluctant to apply the law's extraterritorial sanctions. See generally Evelyn F. Cohn & Alan D. Berlin, *European Community Reacts to Helms-Burton*, N.Y. LAW JOURNAL, Aug. 4, 1997, at S2.

76. See, e.g., Born, *supra* note 10, at 67 ("Other nations have increasingly abandoned territorial limits on their legislation in the post-War years."). For example, German competition laws extend beyond German territory. Gesetz gegen Wettbewerbsbeschränkungen [Law against Restraints on Competition] § 98(2) (1977) (F.R.G.) ("This law shall apply to all restraints on competition that have effects within the territory which this Law applies, even if such effects are caused by actions taken outside such territory."). Similarly, the European Community's Treaty of Rome applies extraterritorially. See Theofanis Christoforou & David B. Rockwell, *Recent Developments, European Economic Community Law: The Territorial Scope of Application of EEC Antitrust Law*, 30 HARV. INT'L L.J. 195 (1989).

subsidiaries of U.S. corporations;⁷⁷ U.S. antifraud provisions to foreign firms' securities;⁷⁸ antitrust law applied to activities abroad with intended effects on U.S. commerce;⁷⁹ economic sanctions against overseas branches of U.S. financial institutions;⁸⁰ and Jones Act damages for U.S. seaman injured on foreign vessels.⁸¹

For the most part, scholars and commentators have examined extraterritoriality under the rubric of a traditional conflict of laws analysis.⁸² This should not be surprising; if one State exercises jurisdiction beyond its borders, it follows that the assertion of jurisdiction impinges on the sovereignty of another State.⁸³ Naturally,

77. Export Administration Act, 50 U.S.C.A. § 2410-2420 (West 1993) (authorizing controls over goods "subject to the jurisdiction of the United States or exported by any person subject to the jurisdiction of the United States" in circumstances involving "national security").

78. Securities Exchange Act, 15 U.S.C. § 78c(a)(17) (1994). *See* Born, *supra* note 10, at 45 ("U.S. lower courts have rejected any strict territorial limits in defining the reach of the federal securities laws.").

79. U.S. DEPT OF JUSTICE, ANTITRUST ENFORCEMENT GUIDELINES FOR INTERNATIONAL OPERATIONS 20 (1995); *see also* U.S. v. Imperial Chem. Indus., 100 F. Supp. 504, 511 (S.D.N.Y. 1951) (applying antitrust laws against a foreign company).

80. *See generally* Robert B. Thompson, *United States Jurisdiction Over Foreign Subsidiaries: Corporate and International Law Aspects*, 15 LAW & POL'Y INT'L BUS. 319 (1983).

81. 46 U.S.C. app. § 688(a) (1994) ("Any seaman who shall suffer personal injury in the course of his employment may, at his election, maintain an action for damages at law."). *See also* Symonette Shipyards, Ltd. v. Clark, 365 F.2d 464, 467 (5th Cir. 1966) (finding extraterritorial reach of Jones Act).

82. Although the question of extraterritorial jurisdiction is distinct from a traditional conflict of laws analysis, the two are often considered together. *See* Rankin, *supra* note 26, at 223 n.19, *citing* ALAN C. SWAN & JOHN F. MURPHY, CASES AND MATERIALS ON THE REGULATIONS OF INTERNATIONAL BUSINESS AND ECONOMIC RELATIONS 515-83 (1991)). The Restatement (Third) of Foreign Relations Law recognizes extraterritorial jurisdiction as being based on several principles: the territorial principle, the effects principle, the nationality principle, the passive personality principle, and the protective principle. § 402, cmts. c-g. For commentary, *see* Eleanor J. Fox, *Extraterritoriality, Antitrust, and the New Restatement: Is Reasonableness the Answer?*, 19 N.Y.U. J. INT'L L. & POL. 565 (1987); Harold G. Maier, *Extraterritorial Jurisdiction at a Crossroads: An Intersection Between Public and Private International Law*, 76 AM J. INT'L L. 280 (1982); Karl M. Meessen, *Conflicts of Jurisdiction Under the New Restatement*, 50 LAW & CONTEMP. PROBS., Summer 1987, at 47. International law most commonly recognizes the territorial and nationality principles as justifications for extraterritorial jurisdiction. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 402, cmt. A (1987). Although the methods of exercising extraterritorial jurisdiction are analyzed *infra* in Part V, a full discussion of the doctrine of extraterritorial jurisdiction is beyond the scope of this article. *See generally* *Extraterritorial Regulation*, *supra* note 23; Born, *supra* note 10; Rankin, *supra* note 26; Jonathan Turley, "When in Rome": *Multinational Misconduct and the Presumption Against Extraterritoriality*, 84 NW. U. L. REV. 598 (1990).

83. *See Extraterritorial Regulation*, *supra* note 23, at 1624 ("Cases involving extraterritorial adjudication and legislation inevitably raise conflicts between competing policy interests.").

where two sovereigns' laws are potentially applicable, the appropriateness of extraterritorial jurisdiction necessitates a conflict of laws analysis in order to resolve the conflict between sovereigns. However, this tension *does not exist* where the exercise of extraterritorial jurisdiction is in an area where no other sovereign can, or does, claim jurisdiction. This is precisely the case on the high seas where many international marine laws must be enforced.⁸⁴

C. *The Marine Environment*

Jurisdiction over the marine environment ostensibly is governed by the Law of the Sea Convention.⁸⁵ A coastal state has jurisdiction over marine resources not only in its internal waters and territorial sea,⁸⁶ but also within its Exclusive Economic Zone (EEZ) which extends up to a maximum of two hundred nautical miles from a nation's shore.⁸⁷ However, under existing international law no State has jurisdiction over marine resources found in the high seas beyond the EEZ.⁸⁸ Therefore, navigation, fishing, and other activities cannot be entirely restricted beyond a two hundred nautical mile boundary. This raises important concerns, many of which are highlighted in this article. As one expert in the field has noted:

84. The importance of this observation is discussed *infra* in Parts IV and V.

85. 1982 LOS Convention, *supra* note 8, 21 I.L.M. at 1271. Cyrille de Klemm and Clare Shine note:

The present Law of the Sea Convention was signed in Montego Bay in December 1982 after approximately ten years of negotiations. The Convention . . . is exceptionally broad in scope. It defines, *inter alia*, the boundaries of each part of the sea and the continental shelf and the legal regime applicable therein; the rights and conditions of passage for shipping through other State's waters; jurisdiction over ships on the high seas and exceptions to the principle of the freedom of the high seas; and the legal and management regime for the exploitation of mineral resources on the deep sea-bed and ocean floor beyond national jurisdiction.

Cyrille de Klemm & Clare Shine, *Biological Diversity Conservation and the Law: Legal Mechanisms for Conserving Species and Ecosystems* 15 (1993) (IUCN Environmental Policy and Law Paper No. 29) [hereinafter IUCN Paper].

86. The 1982 LOS Convention allows a coastal state to define the precise limits of its "territorial sea." See 1982 LOS Convention, *supra* note 8, art. 3, 21 I.L.M. at 1272 ("Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention.").

87. 1982 LOS Convention, art. 57, *supra* note 8, 21 I.L.M. at 1279. The breadth of the exclusive economic zone is defined as follows: "The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." *Id.*

88. IUCN PAPER, *supra* note 85, at 72. However, pursuant to the Geneva Convention on the Continental Shelf of 1958, coastal states retain sovereign rights over sedentary species "in constant physical contact with" the continental shelf, even when that jurisdiction extends beyond the outer limit of the EEZ. Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, 499 U.N.T.S. 311 (*entered into force* June 10, 1964).

[W]here no State has sovereign rights, that is to say in the high seas, animals become international *res nullius* that anybody may exploit, over-exploit or destroy as he pleases. This latter principle is embodied in international law under the name of freedom of fishing in the high seas.⁸⁹

Nevertheless, it is possible for a State to regulate the activities of its own nationals or ships outside its EEZ. For example, Italy has adopted a decree empowering the minister in charge of fisheries to designate areas in the open ocean where fishing by Italian vessels is prohibited.⁹⁰ However, unilateral action by individual states provides little solace because fishermen of other countries are not affected by the Italian order. To be meaningful, fishing restrictions in a particular area of the high seas must be adopted and enforced by all nations fishing in that area.⁹¹ Otherwise, other less environmentally responsible nations will simply fill the void left by the banned fisherman. Thus, *all* relevant States must agree to both a norm and its enforcement. Because of economic and political pressures it is unlikely that States will individually enforce limits on their own domestic fishing and whaling fleets.⁹² Effective control of fishing and whaling activity on the high seas can only be achieved through enforceable international agreements.⁹³

89. De Klemm, *supra* note 50, at 938.

90. IUCN PAPER, *supra* note 85, at 160. An area in the vicinity of the island of Lampedusa has been designated under this prohibition. *Id.* at 160.

91. Concern for this reality has been reflected in many coastal states' "jurisdiction creeping" seaward. See Joyner, *The 1982 LOS Convention*, *supra* note 40, at 756 ("The history of ocean law in the second half of this century has been that of 'jurisdiction creeping' seaward, from three miles, to twelve miles, to 200 miles."); see generally Barbara Kwiatkowska, *Creeping Jurisdiction Beyond 200 Miles in Light of the 1982 Law of the Sea Convention and State Practice*, 22 OCEAN DEV. & INT'L L. 153 (1991); Christopher C. Joyner & Peter N. Decola, *Chile's Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries*, 24 OCEAN DEV. & INT'L L. 99 (1993).

92. See *infra* notes 117-122 and accompanying text. To illustrate, bluefin tuna, "the world's most valuable fish," sells for up to US\$260 per kilogram. Weber, *supra* note 36, at 34; see generally Colin W. Clark, *The Economics of Overexploitation*, 181 SCIENCE 630 (1973).

93. This reality is not limited to environmental issues. Instead, it reflects a larger trend in the international arena. As Born notes:

This century's profound international political, economic, technological, and legal transformations have significantly undermined the strict territorial presumption that prevailed in nineteenth century conceptions of public international law. The doctrine of territorial sovereignty has been eroded by the slow emergence of the United Nations and other international institutions, the increasing importance of public international law in domestic affairs, and the international community's diminishing patience with local tyrants and torturers. Technological advances have ensured that "domestic" military, environmental, health, social and other developments have serious international consequences.

Born, *supra* note 10, at 61-62 (citations omitted).

III. MONITORING AS THE BASIS FOR EFFECTIVE ENVIRONMENTAL AGREEMENTS

The ability of a State to unilaterally withdraw from an agreement can seriously undermine environmental initiatives.⁹⁴ To prevent and mitigate defections, monitoring is required; without it, enforcement is illusory.⁹⁵ Consequently, monitoring plays a critical role as the basis for an effective international enforcement regime.⁹⁶ This is particularly true for agreements that deal with marine resources that must ensure compliance over large spatial scales. Maintaining the efficiency and integrity of marine verification regimes presents a number of challenges, including the immense size of the world's oceans, the nature of the marine organisms being protected, and the unique nature of violations that occur on the seas.

As previously noted, the area of the planet's surface that is considered ocean is immense and "when you're out of sight of land, no one will know what you do."⁹⁷ Accordingly, because "boats operate practically unobserved in international waters, there is little scientific information on the impact of drift net fishing on the marine

94. See *supra* notes 52-53 and accompanying text.

95. See David D. Caron, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT'L L. 154, 171 (1995) ("[T]he notion that a common resource such as whales can be sustainably managed is illusory, particularly when some of the users may act in bad faith and the capacity of the resource manager to police such users is insubstantial."); Samaan, *supra* note 11, at 271 ("The option to withdraw undermines the purpose of any agreement."); *Assent and Enforcement*, *supra* note 11, at 1553 ("International law and international agreements, however, are undermined if states withdraw clandestinely. To prevent clandestine defection, some actor or actors must monitor international agreements. Without monitoring, enforcement becomes impossible.").

96. See, e.g., Shihata at 43. This is not to say that States enter treaties with the intent to violate them:

Quite often, default is not intentional but results from poor implementation capacity, especially when the convention does not require that a state comply with its requirements as a condition for its entry into force with respect to that state. . . . Supervision has an increasingly significant role in the more sophisticated legal regimes being created by modern environmental agreements. Setting up efficient reporting mechanisms and procedures under a multilateral convention to promote a better knowledge of each state's practices is useful.

Shihata, *supra* note 11, at 43 (citations omitted).

Monitoring and supervision play a critical role in a number of recent, comprehensive agreements, including Agenda 21: Programme of Action for Sustainable Development, Rio Declaration on Environment and Development, U.N. Conference on Environment and Development, at 281-83, UN Doc. A/Conf.151/26 (1992), and the Draft International Covenant on Environment and Development by the Commission on Environmental Law of IUCN.

97. Angier, *supra* note 6 (quoting Stephen Palumbi, Professor at the University of Hawaii).

ecosystem."⁹⁸ The difficulty of monitoring compliance over such an immense space calls into question the capability of any organization—even one properly structured and funded—to monitor compliance of international marine agreements.⁹⁹

This realization is especially disconcerting in light of the characteristics of the organisms marine laws attempt to protect. In economic parlance, marine fish and mammals are considered a "renewable resource."¹⁰⁰ That is, extraction is theoretically sustainable where the rate of removal is less than the rate at which the marine system in question renews itself.¹⁰¹ Unfortunately, we have been so effective at catching fish

98. Todd Campbell, *The Snag with Driftnetting—This Chillingly Efficient Fishing Method Threatens the Pacific Marine Environment*, SEATTLE TIMES, Jan. 6, 1991, at 14.

99. Bostwick, in support of this, points out:

Control and effective monitoring of the fisheries is extremely difficult for the Pacific island nations. To monitor effectively millions of square miles of ocean is expensive and requires support, equipment, and enforcement strength. Fishing fleets may avoid enforcement by fleeing to the high seas, by fleeing into another country's EEZ, or by using avoidance tactics.

Lisa K. Bostwick, *Empowering South Pacific Fishmongers: A New Framework For Preferential Access Agreements In The South Pacific Tuna Industry*, 26 LAW & POL'Y INT'L BUS. 897, 908 (1995).

100. See, e.g., A.A. Rosenberg et al., *Achieving Sustainable Use of Renewable Resources*, 262 SCIENCE 828 (1993). The idea of a "renewable resource" should be contrasted with resources that do not replenish on a time scale sufficient for human use. Differentiating the two categories is often difficult:

To begin, we first address a definitional problem that is centered around the meaning of renewable and nonrenewable resources. In discussing the scarcity of a resource such as water many scholars, analysts, and scientists basically classify resources into "renewable" and "nonrenewable" categories. In brief, it is currently accepted to define nonrenewable resources as those which are finite, such as oil and minerals, in contrast to renewable resources, such as water, which are traditionally viewed as "unending" and "replenishable."

Christopher L. Kukk & David A. Deese, *At the Water's Edge: Regional Conflict and Cooperation Over Fresh Water*, 1 UCLA J. INT'L L. & FOREIGN AFF. 21, 25-26 (1996):

101. Thus, it is necessary to regulate the number of individuals caught so that enough remain for breeding and for efficient fishing. See, e.g., Herman E. Daly, *Elements of Environmental Macroeconomics*, in ECOLOGICAL ECONOMICS: THE SCIENCE AND MANAGEMENT OF SUSTAINABILITY 33, 45 (Robert Costanza ed., 1991) ("Renewable resources . . . should be exploited on a profit-maximizing sustained yield basis and in general not driven to extinction Specifically this means that: a) harvesting rates should not exceed regeneration rates; and b) waste emissions should not exceed the renewable assimilative capacity of the environment.").

However, there is considerable disagreement among biologists, ecologists, and economists as to whether, in practice, fisheries can be managed in such a way as to ensure the long-term survival of the resource. See, e.g., P.A. Larkin, *An Epitaph for the Concept of Maximum Sustainable Yield*, 106 TRANS. AM. FISHERIES SOC'Y 1, 4 (1977) ("It may be necessary to compromise MSY [maximum sustainable yield exploitation] in order to preserve genetic variability. It does not seem likely that an MSY based on the analysis of the historic statistics of a fishery is really attainable on a sustained basis."); Paul Christensen, *Driving*

that most of the world's major fisheries are either severely overfished or are in danger of being so.¹⁰² Moreover, traditional systems of regulating fisheries are collapsing almost everywhere, due mainly to the pressure of human population growth and the need to produce greater quantities of fish.¹⁰³

As Part II of this article discussed, the problems of overexploitation are exacerbated by the fact that many marine organisms exist, and are exploited, either while straddling the EEZs of coastal nations or on the high seas.¹⁰⁴ The U.S. biologist Garrett Hardin termed this situation the "tragedy of the commons."¹⁰⁵ Although the activities of each individual nation or group of nationals is "rational" in a neo-classical economic sense, the collective activities of all nations fail to be "rational" because the result is overexploitation.¹⁰⁶ Consequently, "[m]ost contemporary

Forces, Increasing Returns and Ecological Sustainability, in *ECOLOGICAL ECONOMICS: THE SCIENCE AND MANAGEMENT OF SUSTAINABILITY* 75, 84–85 (Robert Costanza ed., 1991) ("The difficulties [sic] with the sustainable yield concept have emerged most clearly in fisheries ecology. . . . Harvesting desirable species increases numbers of less desirable species, as is too evident in fisheries history. The fisheries case points to the complexity of species interaction in ecological systems.").

102. For example:

The catch has fallen in all but 2 of the world's 15 major marine fishing regions; in 4 of them, it has shrunk by more than 30 percent. . . . Analysts from the U.N. Food and Agriculture Organization (FAO) found overfishing in one third of the fisheries they reviewed; they found some depleted fish populations in nearly all coastal waters around the world.

Weber, *supra* note 36, at 21. *See also* Joyner, *The 1982 LOS Convention*, *supra* note 40, at 749 ("The world's ocean fisheries today are ailing gravely from over-exploitation and degradation of the marine environment."); *see generally* D. H. CUSHING, *MARINE ECOLOGY AND FISHERIES* (1975); S. BROWN AND ARIEL E. LUGO, *MANAGEMENT AND STATUS OF U.S. COMMERCIAL MARINE FISHERIES* (1981).

103. *See* IUCN PAPER, *supra* note 85, at 105 ("These factors have encouraged the modernisation of techniques, such as the use of motor craft, the opening up of formally closed systems to outsiders, the loss of traditional knowledge and the disappearance of customary rules and institutions."); ENERGY & RESOURCE QUALITY, *supra* note 40, at 444.

104. *See supra* notes 85–93 and accompanying text.

105. *See* Hardin, *supra* note 50. Hardin's example was that of a common grazing ground where each herder will tend to add to his herd as long as doing so increases his income. *Id.* However, when all herders do this, the inevitable result is overgrazing and the impoverishment of all herders. *Id.*

The economist H.S. Gordon outlined a similar argument for fisheries: "As long as fish can be caught profitably, fisherman will continue to do so leading to overfishing." H. Scott Gordon, *The Economic Theory of a Common-Property Resource: The Fishery*, 62 J. POL. ECON. 124 (1954). As a result, an equilibrium will be reached only when the fish stock has been so overfished that revenues from fishing barely cover operating costs. *Id.* at 128–41.

106. *See* Clark, *supra* note 54, at 322 ("Resolving the tragedy of the commons is seldom simple. It is the very nature of the tragedy that it results from perfectly rational behavior on the part of individuals.").

fisheries experts believe that we are approaching the limits of the ocean to provide people with fishes."¹⁰⁷

Thus, the basic premise—at least the basic scientific premise—that underlies almost every international environmental agreement protecting marine organisms is the need to set a maximum catch limit, primarily through the use of quotas or regional moratoria.¹⁰⁸ These “catch limits” are often set by scientific panels based on a certain species’ or ecosystem’s minimum requirements to reproduce and survive.¹⁰⁹ Typically, once a maximum catch for a given species is set—for example, one hundred minke whales per year from the North Atlantic¹¹⁰—each country is given a set portion of that total limit to allow their nationals to catch. If a State, or its nationals, violates its quota for a given year, it is usually not feasible to recalculate the quotas for the remaining parties, although that recalculation is necessary in order to re-attain equilibrium.¹¹¹ Plainly, unilateral withdrawals—particularly clandestine

107. ENERGY & RESOURCE QUALITY, *supra* note 40, at 444 (citations omitted). See also Richard C. Hennemuth, *Man as Predator*, in CONTEMPORARY QUANTITATIVE ECOLOGY AND RELATED ECOMETRICS 507 (Ganapati P. Patil & Michael L. Rosenzweig eds., 1979).

108. For example, the Northwest Atlantic Fisheries Organization (NAFO), which was created pursuant to the 1978 Northwest Atlantic Fisheries Convention, empowers its Fisheries Commission to establish and allocate fishing quotas within its region of operation. Convention on Future Multilateral Co-operation in the Northwest Atlantic Fisheries, *opened for signature* Oct. 24, 1978, art. XI(4), Canada Treaty Series No. 11, 3-4 (1979) [hereinafter NAFO Convention]. Under the International Convention for the Regulation of Whaling, the International Whaling Commission (IWC) is the regulatory body charged with setting quotas. See ICRW, *supra* note 16, at art. V; International Convention for the Conservation of Atlantic Tunas, May 14, 1966, 20 U.S.T. 2887, 673 U.N.T.S. 63 (establishing quotas for bluefin tuna and swordfish, and minimum size limits for other species).

109. See NAFO Convention, *supra* note 108, at art. XI(8). Under the NAFO Convention, the Fisheries Commission may refer any questions regarding conservation and management within its regulatory area to its Scientific Council. *Id.* Similarly, under the International Convention for the Regulation of Whaling, *supra* note 16, the IWC’s quotas are ostensibly based on scientific estimations of the number of individual whales of each species.

In a similar context, the Ontario Ministry of Natural Resources made significant changes in its management of the Lake Ontario sport fishery based on scientific estimates of the lake’s carrying capacity in order to stave off an “ecosystem collapse.” See Ontario Ministry of Natural Resources, News Release Communiqué, April 15, 1993, (“The decision . . . is based on scientific findings, and has been made in order to sustain an attractive and diverse sport fishery on Lake Ontario in the future. . . .’ A reduction in predator demand is required in order to sustain the entire fish community over the long-term.”), in David S. Ardia, THE ROLE OF MODELING IN LAKE ONTARIO FISHERIES MANAGEMENT (1995) (unpublished M.S. report, State University of New York, on file with author).

110. This is the actual 1989 minke whale catch limit set for the West Greenland Stock in the North Atlantic. ICRW, *supra* note 16, 161 U.N.T.S. 72, at table 1 (schedule amended June 1989).

111. See, e.g., Valeria Neale Spencer, *Domestic Enforcement of International Law: The International Convention for the Regulation of Whaling*, 2 COLO. J. INT’L ENVTL. L. & POL’Y 109, 111 (1991) (“Since the [ICRW] contains no mechanism to adjust a quota after a

withdrawals—can significantly undermine the effectiveness of international marine agreements because these agreements must rely on a quota system tied to a maximum supportable extraction rate.¹¹²

In fact, the extent of past violations of international marine laws is staggering.¹¹³ It is not simply the magnitude of the violations, however, that is significant to the discussion here; the *nature* of the violations also undermines the effectiveness of international attempts at monitoring and enforcement. Most international regimes are primarily concerned with—and structured to deal with—ensuring the compliance of States.¹¹⁴ However, many violations of marine agreements are perpetrated by individuals and non-state actors.¹¹⁵ As stated in the wildlife protection context, “the real conflict of interests is not between the states; it lies between those whose economic or other interests involve the exploitation of animals and the animals whose welfare is at stake.”¹¹⁶

This reality cannot be overemphasized. For those actors intent on violating international marine agreements, the transgression is an easy one to “get away with.” In oceans twice the size of all land surfaces combined, where no nation patrols or even has jurisdiction to enforce its laws, a ship, or group of ships, can easily catch whales and fish unseen.

nation elects to opt out, each nation that opts out of a quota throws the equilibrium off balance.”).

112. See *supra* note 53. Illegal fishing seriously undermines conservation objectives:

Illegal fishing biases catch statistics necessary for effective fishery management as well. Without accurate catch and by-catch statistics, it is impossible to determine maximum or optimum sustainable yields or to monitor the health of the fish stocks. Underreporting of catch sizes poses similar threats to effective fishery management, conservation, loss of access fees, and sustainable development.

Bostwick, *supra* note 99, at 908.

113. See Angier, *supra* note 6 (discussing unreported killing of humpback whales by the Soviet Union). In response to this new information, the IWC stated that it would have to rewrite its catch figures for the last forty years—figures on which extraction and recovery rates, as well as quotas, had been based. See Hearst, *supra* note 6. Ray Gambell, President of the IWC stated: “We knew there was a black hole in our calculations which did not make sense. Now we know that thousands of whales we thought were protected have been systematically slaughtered. The enormity of the deception is staggering.” *Id.*

114. See, e.g., O’Connell, *supra* note 11, at 50 (tracing the development of international law and noting that “the chief actors were governments, and the activities were conducted at the interstate level”).

115. *Institutional Arrangements*, *supra* note 18, at 1601 (“[I]nternational environmental law ultimately seeks to regulate non-state actors—whether NGOs, businesses, or individuals.”). Indeed, there is a growing recognition of the role of non-state violators in international environmental law generally. See *Assent and Enforcement*, *supra* note 11, at 1551 (“[A]lthough traditional international environmental law largely concerns itself with interstate actions, most environmental damage is caused not by states, but by individuals and corporations.”); see generally O’Connell, *supra* note 11.

116. Bowman, *The Protection of Animals Under International Law*, 4 CONN. J. INT’L L. 487, 494 (1989).

Unlike a forest, where an illegal clear-cut may remain visible for decades, a slaughtered 100 foot long, 150 ton blue whale leaves nothing to mark its passing.¹¹⁷ In fact, once the catch is processed—which is often done on the same ship or on a nearby “factory ship”—the product is readily integrated into worldwide commerce where it is nearly impossible to trace.¹¹⁸

Not surprisingly, as fishing yields have declined over the past half-century,¹¹⁹ the economic incentives for individual extractors to turn to “pirating” have become increasingly compelling.¹²⁰ Frequently, fisherman and whalerman who wish to avoid their own government’s scrutiny will sail under a flag-of-convenience, a flag purchased from another, often poorer country.¹²¹ These “pirate” whaling and fishing ships are devastating to a scientifically based quota system and exceptionally difficult to monitor.¹²²

117. Cf. AMERICA, *A Horse with No Name*, on HORSE WITH NO NAME (Dewey Bunnell 1971) (“The ocean is a desert with its life underground and a perfect disguise above.”). The largest recorded size for a blue whale (a female Antarctic blue) is approximately 100 feet long and more than 150 tons, but the average is 70 to 85 feet long and 90 to 125 tons. ERICH HOYT, *THE WHALES OF CANADA* 42 (1984).

118. See generally Angier, *supra* note 6 (discussing the difficulty of tracing illegal whale products in worldwide commerce to the region where the whales were poached and to the poachers themselves).

119. For example:

[T]otal pounds of fish caught each year by U.S. fisheries remained about constant from 1950 to 1978 despite wild fluctuations in landings of individual species and despite an estimated three- to fourfold increase in the quantity of economic energy used for fishing. Thus the catch per effort (and the food energy returned per unit of fossil energy invested) has declined considerably.

ENERGY AND RESOURCE QUALITY, *supra* note 40, at 446.

120. The financial rewards from certain species are quite lucrative. See *Import Bans on Bluefin Tuna a First*, ENVIRONMENTAL NEWS SERV., Dec. 4, 1996 (noting that the price for a single bluefin tuna in Japan ranges up to \$40,000). Clark argues:

The profits from whaling were immense. Large species such as the blue whale cannot sustain an annual harvest of more than 2% or 3% of the breeding stock. With normal rates of return on investment in the neighborhood of 10%, the “optimum” strategy for the whalers was probably to simply wipe out the whales and invest the proceeds elsewhere. This seems to be precisely what happened . . .

Clark, *supra* note 54, at 325. See generally Colin W. Clark & R. Lamberson, *An Economic History and Analysis of Pelagic Whaling*, 6 MARINE POL’Y 103 (1982); Clark, *supra* note 92.

121. See Jenkins, *supra* note 41, at 217; Bostwick, *supra* note 99, at 908 (“[T]he trans-boundary nature of the industry is conducive to corporate veils. Owners may purchase flags of convenience (reflagging), register vessels under different names, and establish intricate owner/operator relationships.”); see also *Driftnet Use Continues Despite Ban*, THE GAZETTE (Montreal), July 19, 1993, at B2.

122. See PATRICIA BIRNIE, LEGAL MEASURES FOR THE PREVENTION OF PIRATE WHALING 2 (IUCN Environmental Policy and Law Paper No. 19, 1982). Vessels which seek to evade the IWC’s regulations will typically register their vessel under the flag of a non-

IV. EXISTING ENFORCEMENT MECHANISMS IN INTERNATIONAL MARINE LAWS

This part examines current mechanisms for the monitoring and enforcement of international environmental law protecting marine organisms. Initially, it is helpful to have an understanding of existing international environmental infrastructure generally. Once the basic infrastructure is laid out, this part briefly canvasses current international agreements governing the marine environment. For the most part, these agreements are neither comprehensive nor global. Instead, most are regional or species-specific. Fortunately, the 1982 Law of the Sea Convention provides an important framework for the creation of a comprehensive regime for the marine environment. Finally, this part also explores, in greater depth, a current controversial marine regulatory issue: the protection of highly migratory fish populations.

A. Overview of International Environmental Infrastructure

The first official articulation of the need for international action to protect living organisms came at the turn of this century when the London Convention for the Protection of Wild Animals, Birds, and Fish in Africa (London Wild Fauna Convention) was concluded on May 19, 1900.¹²³ Although the London Wild Fauna Convention was never ratified, it marked the international community's first acknowledgment that individual state protections were insufficient to protect the world's biotic systems. Early international conservation laws, however, were not global; rather, agreements were either regional, dealing with specific geographic areas,¹²⁴ or sectoral, dealing with particular species.¹²⁵

It was not until 1972 that a global environmental infrastructure began to manifest itself in the form of the United Nations Environment

party state. *Id.*; see also Angier, *supra* note 6, at C4 (quoting Professor Stephen Palumbi, "This just shows how much pirate whaling can occur without anyone noticing it.").

123. Convention for the Preservation of Wild Animals, Birds and Fish in Africa, May 19, 1900, 94 B.F.S.P. 715. The original signatories were the African colonial powers of France, Germany, Great Britain, Italy, Portugal and Spain. The Convention's objective was "to prevent the uncontrolled massacre and to ensure the conservation of diverse wild animal species in their African possessions which are useful to man or inoffensive." *Id.* in Preamble.

124. For example the Convention for the Protection of Birds Useful to Agriculture, signed in Paris on March 19, 1902, involved only European parties. *Id.* Similarly, the London Convention Relative to the Preservation of Fauna and Flora in their Natural State, signed on November 8, 1933, only protected areas in Africa. See IUCN PAPER, *supra* note 85, at 7.

125. See, e.g., International Convention for the Conservation of Atlantic Tunas, May 16, 1966, 20 U.S.T. 2887, 673 U.N.T.S. 63; Convention for the Conservation of Salmon in the North Atlantic Ocean, Mar. 2, 1982, T.I.A.S. No. 10,789; International Convention for the Regulation of Whaling, Dec. 2, 1946, T.I.A.S. No. 1849, 161 U.N.T.S. 72.

Programme (UNEP).¹²⁶ The United Nations General Assembly established UNEP to promote international cooperation on environmental protection and to coordinate environmental action within the United Nations.¹²⁷ Although UNEP has been successful in a number of limited endeavors,¹²⁸ its role has been significantly limited by international politics and by its own organizational structure.

UNEP is a relatively small UN agency with a governing council and secretariat located in Nairobi, Kenya. In the assessment of many observers, UNEP has generally failed to be an effective oversight and enforcement institution due to its insignificant formal powers.¹²⁹ In addition, UNEP's funding has been criticized as inadequate because it must rely solely on voluntary contributions to the Environment Fund, its primary funding source.¹³⁰ As one commentator has remarked: "UNEP does not have the power that one of the more specialized agencies of the

126. Also in 1972, the United Nations Conference on the Human Environment met in Stockholm. The question of establishing an institutional structure for *enforcement*, however, was not addressed. *Report of the United Nations Conference on the Human Environment*, Stockholm, June 5-16, 1972, U.N. Doc. A/Conf.48/14/Rev. 1. See also Anne Thompson Feraru, *Environmental Actors*, in ENVIRONMENT AND THE GLOBAL ARENA 43, 50 (Kenneth A. Dahlberg et al. eds., 1985). For a discussion of the results of the conference, see generally Louis B. Sohn, *The Stockholm Declaration on the Human Environment*, 14 HARV. INT'L L.J. 423 (1973), and Christopher C. Joyner & Nancy D. Joyner, *Global Eco-Management and International Organizations: The Stockholm Conference and Problems of Cooperation*, 14 NAT. RESOURCES J. 533 (1974).

127. See *Institutional and Financial Arrangements for International Environmental Cooperation*, G.A. Res. 2997, 27 U.N. GAOR, 27th Sess., Supp. No. 30, at 43, U.N. Doc. A/8730 (1972); DOUGLAS WILLIAMS, *THE SPECIALIZED AGENCIES AND THE UNITED NATIONS: THE SYSTEM IN CRISIS* 46 (1987).

128. From its beginning:

UNEP has been successful in coordinating scientific data and research missions, warning of environmental threats, creating 'soft law,' stimulating international agreements on a wide range of environmental subjects, administering environmental trust funds used to implement specific treaty regimes, and providing start-up costs for specific international environmental treaties.

Anderson, *supra* note 11, at 806 (citations omitted).

129. See, e.g., Paul C. Szasz, *Restructuring the International Organizational Framework*, in ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW: NEW CHALLENGES AND DIMENSIONS 340, 351-56 (Edith Brown Weiss ed., 1992); Palmer, *supra* note 71, at 263; Jenkins, *supra* note 41, at 200 ("UNEP can claim some successes, but has no formal powers and as presently constituted is an inadequate organ for the magnitude of world environmental problems.").

130. See *Institutional Arrangements*, *supra* note 18, at 1585 ("UNEP has also been chronically underfunded. In 1989, nations' contributions to its Environment Fund were below the 1979 level in real terms.") (citing *UNEP: 15th Session of the Governing Council*, 19 ENVTL. POL'Y & L. 86, 87 (1989)); Anderson, *supra* note 11, at 807, 807 n.223 ("[i]n 1994, the UNEP Fund received total funding of less than US\$46 million, of which the United States provided nearly 50%.") (citing *Contributions Pledged or Paid to the Fund of the United Nations Environment Programme for 1994, as of 30 June 1994*, U.N. Doc. A/Conf.173/2, at 37-38).

United Nations has, such as the Food and Agriculture Organization (FAO), and therefore it has little influence on the environmental policies pursued by other United Nations agencies."¹³¹ Indeed, in 1993, the UNEP Governing Council acknowledged these limitations when it shifted UNEP's focus from environmental monitoring to helping developing countries use environmentally sound technologies.¹³²

Although a single "global" environmental compliance and monitoring agency currently does not exist, there are a number of smaller regional agreements, species-specific agreements, and specialized marine organizations that provide regionalized monitoring and compliance functions. These regional and species-specific structures are important because they can be used as building blocks for the establishment of a more comprehensive global system.

The United Nations Regional Seas Programme is an attempt to create a comprehensive monitoring and compliance structure for the marine environment. Under the United Nations Regional Seas Programme there are eleven regions, containing 120 of the 130 coastal states.¹³³ Working with UNEP, coastal states in each region formulate specific "action plans" that identify areas of cooperation; these "action plans" are then negotiated into specific conventions.¹³⁴ However, much of the focus of the Regional Seas Programme has been on pollution mitigation, with the "sound management of natural resources" merely an ancillary objective.¹³⁵

131. Samaan, *supra* note 11, at 263. See also Caldwell, *International Environmental Politics: America's Response to Global Imperatives*, in ENVIRONMENTAL POLICY IN THE 1990S, at 301, 316 (Norman Vig & Michael Kraft eds., 1990) (stating that UNEP "has very limited ability to influence policies of the United Nations specialized agencies"); *Institutional Arrangements*, *supra* note 18, at 1585.

132. See UNEP to Focus on 'Capacity Building' in Developing Countries, *Its Council Decides*, BNA INT'L ENVTL. DAILY, June 8, 1993.

133. See generally PETER H. SAND, MARINE ENVIRONMENTAL LAW IN THE UNITED NATIONS ENVIRONMENT PROGRAMME (1988).

134. Joyner, *Biodiversity*, *supra* note 30, at 672 n.172.

135. Representative conventions include the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution, Feb. 16, 1976, 15 I.L.M. 285, art. 5 [hereinafter Barcelona Convention] (requiring "all appropriate measures to prevent and abate pollution of the Mediterranean Sea Area caused by dumping from ships and aircraft"); Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, Apr. 24, 1978, 17 I.L.M. 511, art. III(a), IV [hereinafter Kuwait Convention] (seeking to "prevent, abate, and combat pollution in the Sea Area" caused by "intentional or accidental discharges from ships"); Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Mar. 23, 1981, 20 I.L.M. 746, art. 4(1) [hereinafter Abidjan Convention] (aiming "to prevent, reduce, combat and control pollution of the Convention area and to ensure sound environmental management of natural resources"); Convention for the Protection of the Marine Environment and Coast Area of the South-East Pacific, Nov. 12, 1981, U.N.Doc UNEP/GC/INF.11, 185, art. 3(1) [hereinafter Lima Convention] (obligating parties to "prevent, reduce and con-

For example, the most ambitious regional agreement, in terms of geographic scope, is the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (hereinafter "Noumea Convention").¹³⁶ The Noumea Convention obligates the parties "to prevent, reduce and control pollution of the Convention Area from any source, and to ensure sound environmental management and development of natural resources."¹³⁷ Although the Noumea Convention, as well as the other Regional Seas Programme conventions, obligate contracting states to "take all appropriate measures," the conventions lack comprehensive monitoring, compliance, and enforcement structures.¹³⁸ Furthermore, the Regional Seas Programme appears to lack integration between the individual regional conventions.

In addition to the United Nations Regional Seas Programme, there are several important regional agreements that govern living resources

control pollution of the marine environment and coastal area of the [South Pacific]"); Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Mar. 24, 1983, 22 I.L.M. 227, arts. 5-7 [hereinafter Cartegena Convention] (requiring parties to "prevent, reduce and control pollution"); Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, June 21, 1985 [hereinafter Nairobi Convention], *reprinted in SAND, supra* note 133, at 156 (obligating parties to prevent, reduce, and combat pollution and to ensure sound environmental management of natural resources); Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Nov. 24, 1986, 26 I.L.M. 41 [hereinafter Noumea Convention].

136. Noumea Convention, *supra* note 135. In its original form, the Noumea Convention covered:

(i) the 200 nautical mile zones established in accordance with international law off:

American Samoa, Australia (East Coast and Islands to eastward including Macquarie Island), Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia and Dependencies Wallis and Futuna, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Western Samoa

(ii) those areas of high seas which are enclosed from all sides by the 200-nautical-mile zones referred to in sub-paragraph (i); areas of the Pacific Ocean which have been included in the Convention Area pursuant to article 3. . . .

Id. at art 2(a). *See also* Joyner, *Biodiversity, supra* note 30, at 677-78.

137. Noumea Convention, *supra* note 135, at art. 5(1).

138. Instead, parties are to apply "internationally recognized rules and standards." Abidjan Convention, *supra* note 135, at art. 6. *See also* Barcelona Convention, *supra* note 135, at art. 5 ("all appropriate measures"); Kuwait Convention, *supra* note 135, at art. V ("all appropriate measures"); Lima Convention, *supra* note 135, at art. 3 ("adopt appropriate measures"); Cartegena Convention, *supra* note 135, at art. 5 ("all appropriate measures"); Nairobi Convention, *supra* note 135, at art. 4(1) ("take all appropriate measures"); Noumea Convention, *supra* note 135, at art. 5 ("take all appropriate measures").

in and around Antarctica, including the Antarctic Treaty,¹³⁹ its associated Protocol on Environmental Protection of the Antarctic (Antarctic Protocol),¹⁴⁰ and the Convention on the Conservation of Antarctic Marine Living Resources.¹⁴¹ Five annexes are attached to the Antarctic Protocol, covering environmental impact assessment,¹⁴² conservation of fauna and flora,¹⁴³ waste disposal and waste management,¹⁴⁴ marine pollution,¹⁴⁵ and the creation of protected areas.¹⁴⁶ As in the other agreements examined here, the parties to the Antarctic Protocol are obligated to take "appropriate measures" to ensure compliance.¹⁴⁷ However, actual compliance with the Antarctic Protocol and its annexes is left solely to individual governments party to the protocol.¹⁴⁸

There are also a number of treaty agreements that are designed to manage and protect particular marine species. These include the International Convention for the Conservation of Atlantic Tunas,¹⁴⁹ the Convention for the Establishment of an Inter-American Tropical Tuna Commission,¹⁵⁰ the Convention for the Conservation of Salmon in the North Atlantic Ocean,¹⁵¹ the Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United

139. The Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71.

140. Protocol on Environmental Protection of the Antarctic, Oct. 4, 1991, 30 I.L.M. 1455. The States party to the Antarctic Treaty that negotiated the protocol include Argentina, Australia, Belgium, Brazil, Chile, China, Ecuador, Finland, France, Germany, India, Italy, Japan, the Netherlands, New Zealand, Norway, Peru, Poland, Russia, South Africa, South Korea, Spain, Sweden, United Kingdom, United States, and Uruguay. Joyner, *Biodiversity*, *supra* note 30, at 680 n.218.

141. Convention on the Conservation of Antarctic Marine Living Resources, May 20, 1980, 19 I.L.M. 841 [hereinafter CCAMLR]. Discussed *infra* notes 162–171 and accompanying text.

142. Antarctic Protocol, *supra* note 140, at Annex I, 30 I.L.M. 1473.

143. *Id.* at Annex II, 30 I.L.M. 1476.

144. *Id.* at Annex III, 30 I.L.M. 1479.

145. *Id.* at Annex IV, 30 I.L.M. 1483.

146. *Id.* at Annex V, available in 1991 WL 568527.

147. *Id.* at art. 13(1), 30 I.L.M. 1466.

148. Each party is expected to exercise enforcement powers over their flag ships and over ships supporting that government's Antarctic operations. *Id.* at art. 2; Joyner, *Biodiversity*, *supra* note 30, at 681–82 ("Enforcement is left to each contracting party.').

149. International Convention for the Conservation of Atlantic Tunas, May 14, 1966, 20 U.S.T. 2887, 673 U.N.T.S. 63. The International Commission for Conservation of Atlantic Tunas (ICCAT) is one of the most important organizations because it covers nearly all of the Atlantic Ocean and has a significant number of member states. Parties to the treaty include the United States, Japan, South Africa, Ghana, Canada, France, Spain, Brazil, Portugal, Morocco, Korea, Senegal, Ivory Coast, Cuba, Angola and the Soviet Union.

150. Convention for the Establishment of an Inter-American Tropical Tuna Commission, May 31, 1949, 1 U.S.T. 230, 80 U.N.T.S. 3 (*entered into force* Mar. 3, 1950).

151. Convention of Salmon in the North Atlantic Ocean, *opened for signature* Mar. 2, 1982, T.I.A.S. No. 10,789 (*entered into force* Oct. 1, 1983).

States of America,¹⁵² and the International Convention for the Regulation of Whaling.¹⁵³ Although these agreements are important advances in the conservation of marine biodiversity, their effectiveness is hampered because they are both regional and restricted to individual species.¹⁵⁴ In addition, enforcement mechanisms, if they exist at all, are ineffective because these "conservation conventions must survive on little money and skeleton staffs, as the Parties are generally unwilling to contribute to more than a bare-bones budget."¹⁵⁵

Likewise, there are a number of important international and regional organizations that have been established to manage particular aspects of the marine environment, including fisheries. Arguably the organization with the broadest geographic scope is the International Maritime Organization (IMO). The United Nations established the IMO in 1959¹⁵⁶ to provide a forum for governments on technical matters affecting international merchant shipping.¹⁵⁷ Membership in the IMO was intended to represent both traditional maritime states and states that rely on shipping.¹⁵⁸ As a result, the IMO has been primarily a forum for merchant marine interests.¹⁵⁹ Nonetheless, through its Marine

152. *Treaty on Fisheries*, Apr. 2, 1987, U.S.-Certain Pacific Island States, 26 I.L.M. 1048.

153. ICRW, *supra* note 16.

154. See Julie R. Mack, *International Fisheries Management: How the U.N. Conference on Straddling and Highly Migratory Fish Stocks Changes the Law of Fishing on the High Seas*, 26 CAL. W. INT'L L. J. 313, 321 (1994) ("ICCAT has not fared as well . . . because it suffers from the common problems of lack of consensus on management measures and allocation levels. On the whole, organizations like these have simply been insufficient to regulate migratory stocks on an international level."). See generally Christopher M. Weld, *Critical Evaluation of Existing Mechanisms for Managing Highly Migratory Pelagic Species in the Atlantic Ocean*, 20 OCEAN DEV. & INT'L L. 285 (1989).

155. IUCN PAPER, *supra* note 85, at 46. See also M. Johanne Picard, *International Law of Fisheries and Small Developing States: A Call for the Recognition of Regional Hegemony*, 31 TEX. INT'L L.J. 317, 333 (1996) ("The most significant practical constraint is ICCAT's inability to allocate allowable catches once it has determined the total allowable catch or maximum sustainable yield of the fish stocks.").

156. The IMO was originally the Inter-Governmental Maritime Consultative Organization. See THE INTERNATIONAL MARITIME ORGANIZATION 1 (Samir Mankabady ed., 1984); J. KIWANUKA, ENVIRONMENTAL PROTECTION 40-43 (1990).

157. See THE INTERNATIONAL MARITIME ORGANIZATION, *supra* note 156, at 1; see also R. MICHAEL M'GONIGLE & MARK W. ZACHER, POLLUTION, POLITICS, AND INTERNATIONAL LAW 39-77 (1979).

158. See VI NEW DIRECTIONS IN THE LAW OF THE SEA 551 (Robin Churchill et al. eds., 1977).

159. See *Institutional Arrangements*, *supra* note 18, at 1595 ("[M]aritime business interests view the International Maritime Organization (IMO) as attentive to their concerns."); Eldon V.C. Greenberg, *IMCO: An Environmentalist's Perspective*, 8 CASE W. RES. J. INT'L L. 131, 135 (1976). As expected, the IMO has been criticized for bowing to pressure from the shipping industry. See, e.g., ROBERT A. SHINN, THE INTERNATIONAL POLITICS OF MARINE POLLUTION CONTROL 123 (1974); Greenberg, *supra*, at 134.

Environment Protection Committee the IMO has begun to focus on pollution issues.¹⁶⁰ Indeed, under Article 211 of the 1982 Law of the Sea Convention, the IMO is presumed to be the organization "competent" to authorize establishment of marine pollution standards.¹⁶¹ Although the Marine Environment Protection Committee of the IMO has an important role in the reduction of marine pollution, it does not currently have an identifiable role in the direct protection of marine organisms.

A second organization charged with protecting the marine environment is the Commission on the Conservation of Antarctic Marine Living Resources (CCAMLR Commission). The CCAMLR Commission was established under the authority of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)¹⁶² and "functions as the primary conservation agency for the whole of the Southern Ocean, encompassing all high seas ocean south of the Antarctic Convergence."¹⁶³ The CCAMLR Commission has considerable powers and may designate protected species, set harvesting quotas, specify open and closed seasons, and regulate harvesting methods.¹⁶⁴ And, unlike other

160. See Joyner, *Biodiversity*, *supra* note 30, at 670 ("Though the IMO initially placed special emphasis on the safety of life at sea, it has recently focused on the prevention and control of marine pollution from ships."). See also *Institutional Arrangements*, *supra* note 18, at 1607-08 ("A special majority of [the Marine Environment Protection Committee of the IMO] can adopt amendments to technical provisions in the 1973 Convention for the Prevention of Pollution from Ships."); M'GONIGLE & SACHER, *supra* note 157, at 48-49.

161. 1982 LOS Convention, *supra* note 8, at art. 211, 21 I.L.M. 1310. See also Joyner, *Biodiversity*, *supra* note 30, at 671 n.163 ("Article 211 provides that rules and standards for the prevention, reduction and control of pollution of the marine environment should be established through the 'competent international organization,' which is widely presumed to be the IMO.").

162. CCAMLR, *supra* note 141, 19 I.L.M. 841. The CCAMLR was negotiated following the 9th Antarctic Treaty Consultative Party meeting in London in September and October of 1977, and a special meeting of the Consultative Parties in 1978. See David M. Edwards & John A. Heap, *Convention on the Conservation of Antarctic Marine Living Resources: A Commentary*, 20 POLAR RECORD 353, 354-56 (1981). "The parties were brought to the negotiating table out of a concern that a lack of management in the past had been responsible for the wholesale destruction of Antarctic resources." Stuart B. Kaye, *Legal Approaches to Polar Fisheries Regimes: A Comparative Analysis of the Convention for the Conservation of Antarctic Marine Living Resources and the Bering Sea Doughnut Hole Convention*, 26 CASE W. RES. INT'L L.J. 75, 81 (1995).

163. Joyner, *Biodiversity*, *supra* note 30, at 671; see also CHRISTOPHER C. JOYNER, ANTARCTICA AND THE LAW OF THE SEA 221-62 (1992). "The Antarctic Convergence is the meeting-place of the cold waters of the Antarctic and the warm waters from the north. It acts literally as a biological barrier separating two different ecosystems inhabited by different species." IUCN PAPER, *supra* note 85, at 48 n.9.

164. "Among these policies have been a precautionary cap on harvesting krill, closure of certain fisheries for cod and mackerel around island groups in the region, prohibition of certain pelagic and bottom nets based on mesh size, and a fishing vessel inspection and reporting system." IUCN PAPER, *supra* note 85, at 48. See also Joyner, *Biodiversity*, *supra* note 30, at 672.

fisheries treaties, the CCAMLR lays down specific principles of conservation that govern the CCAMLR Commission's decisions regarding harvesting and associated activities in the area covered by the convention.¹⁶⁵ As a result, the CCAMLR has generally received praise from commentators: "CCAMLR is therefore the first and only fisheries treaty explicitly intended to function as an ecological treaty as well. It is accordingly much more than a commercial exploitation treaty and constitutes a milestone in this field."¹⁶⁶

There are, however, significant limitations on the CCAMLR Commission's effectiveness as a comprehensive conservation agency under the CCAMLR. The CCAMLR Commission meets only once a year and its decisions must be made by consensus.¹⁶⁷ This effectively gives any participating state a right to veto any proposed measure.¹⁶⁸ Consequently, there is considerable institutional inertia that must be overcome in order for the CCAMLR to make controversial decisions to protect or limit catches.¹⁶⁹ The CCAMLR also contains no specific enforcement procedures to allow the CCAMLR Commission to implement its measures. Instead, the CCAMLR provides that the CCAMLR Commission can "draw to the attention" of contracting parties or third parties matters that are inimical to the principles of the Convention, or that adversely

165. These principles include:

The prevention of the decrease in the size of any harvested population to levels below those which ensure its stable recruitment...the maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources...prevention of changes or minimization of the risk of changes in the marine ecosystem which are not potentially reversible over two or three decades. . . .

CCAMLR, *supra* note 141, at art. II(a)-(c). See also IUCN PAPER, *supra* note 85, at 49.

166. IUCN PAPER, *supra*, note 85, at 49. See also Joyner, *Biodiversity*, *supra* note 30, at 672 ("Since 1982, the CCAMLR [Commission] has adopted, with expert scientific advice, at least seventy-five conservation measures in accordance with an ecosystemic approach aimed at sustaining biological diversity.").

167. See Ronald F. Frank, *The Convention on the Conservation of Antarctic Marine Living Resources*, 13 OCEAN DEV. & INT'L L. 291, 309-10 (1983); Joyner, *Biodiversity*, *supra* note 30, at 672. A U.S. proposal during the negotiations for a two-thirds majority vote was rejected. W.M. BUSH, 1 ANTARCTICA AND INTERNATIONAL LAW 413 (1982).

168. Furthermore, although all States are bound to implement conservation measures, they may object pursuant to Article IX(6). This permits an objection to a measure within ninety days of its promulgation, thus making the measure non-binding on the objecting state. Other members can use such an objection to call a meeting of the CCAMLR Commission to review the offending conservation measure. Members may also lodge further objections to the measure at the same meeting or within thirty days after it. CCAMLR, *supra* note 141, at art. IX(6)(b)-(d).

169. See, e.g., IUCN PAPER, *supra* note 85, at 49 ("Unfortunately, decisions of the Commission must be taken by consensus and this does not facilitate the taking of sound conservation-based decisions.").

affect the implementation of it.¹⁷⁰ Thus, "the only weapon at the Commission's disposal is the embarrassment of being publicly seen as a state lacking an environmental conscience."¹⁷¹

There are also a number of regional fishery associations that play a role in the management of marine organisms. The Northwest Atlantic Fisheries Organization (NAFO) and the Northeast Atlantic Fisheries Commission¹⁷² are examples of subregional fishery commissions designated to manage the conservation of marine "resources" within their respective high seas fisheries. Although these associations are important in the conservation of marine organisms, their overall usefulness is limited due to their circumscribed geographic scope and weak formal powers.

The NAFO, one of the largest regional fisheries organizations, was created by the Northwest Atlantic Fisheries Convention of 1978 as a regional fisheries organization to "contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of the Convention Area."¹⁷³ Although the Northwest Atlantic Fisheries Convention applies to all the waters of the Northwest Atlantic, NAFO's regulatory powers extend only to the "Regulatory Area"—that area of the Northwest Atlantic over which coastal states have no jurisdiction.¹⁷⁴

NAFO's Fisheries Commission is responsible "for the management and conservation of the fishery resources of the Regulatory Area."¹⁷⁵ The

170. CCAMLR, *supra* note 141, at art. X. Enforcement must be rendered domestically. *Id.* at art. XXI(1). States are obliged to ensure enforcement of conservation measures which are binding upon them, and to provide the Commission with data requested in relation to their activities in the CCAMLR Area. *Id.* at art. XX.

171. Kaye, *supra* note 162, at 85.

172. Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries, Nov. 18, 1980, 1285 U.N.T.S. 129.

173. NAFO Convention, *supra* note 108, at art. II(1). As of October 1995, there were fifteen contracting parties to the Northwest Atlantic Fisheries Convention: Bulgaria, Canada, Cuba, Denmark, Estonia, European Economic Community, Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, Romania, and the Russian Federation. See Notice of Other Documents, 34 I.L.M. 1452 (1995).

174. NAFO Convention, *supra* note 108, at art. I. The Convention Area is defined as:

... the waters of the Northwest Atlantic Ocean north of 35° 00' north latitude and west of a line extending due north from 35° 00' north latitude and 42° 00' west longitude to 59° 00' north latitude, thence due west to 44° 00' west longitude, and thence due north to the coast of Greenland, and the waters of the Gulf of St. Lawrence, Davis Strait and Baffin Bay south of 78° 10' north latitude.

Id. at art. I(1). Article I(2) defines the Regulatory Area as "that part of the Convention Area which lies beyond the areas in which coastal States exercise fisheries jurisdiction." *Id.* at art. I(2).

175. *Id.* at art. XI(1). Membership in the Fisheries Commission is determined by the General Council and consists of contracting parties which participate in the fisheries of the

Fisheries Commission, based on the advice of NAFO's Scientific Council, has the power to establish and allocate fishing quotas to NAFO members for various fishing stocks found in the international waters of the Northwest Atlantic.¹⁷⁶ The Fisheries Commission can also "adopt proposals for international measures of control and enforcement within the Regulatory Area" in order to enforce various NAFO rules and regulations.¹⁷⁷

Similar to other regional fisheries organizations, NAFO has a number of deficiencies that render its conservation and management measures largely ineffective. First, NAFO has no means of forcing Member States to abide by the rules established by the Fisheries Commission. Article XII of the Northwest Atlantic Fisheries Convention allows any member of the Fisheries Commission to be exempted from any new proposal made by the Fisheries Commission by simply voicing an "objection" to that proposal to the Executive Secretary within a specified time period.¹⁷⁸ If a majority of members voice objections to the Fisheries Commission's proposal, the proposal does not become binding on any of the Commission's members unless they later agree among themselves to be bound by the proposal.¹⁷⁹

Article XII of the Northwest Atlantic Fisheries Convention also allows a member of the Fisheries Commission to choose not to be bound by Commission rules and regulations already in force.¹⁸⁰ Once even a single member has opted out of a particular Fisheries Commission managerial or conservatory measure in this manner, any other Commission member may cease to be bound by that measure upon the date that the Executive Secretary receives notice of the member's intention not to be bound.¹⁸¹

Regulatory Area and any contracting parties which have provided satisfactory evidence that they expect to participate in the fisheries of the Regulatory Area during the year of that annual meeting or during the following calendar year. *Id.* at art. XIII(1).

176. *Id.* at art. XI(2) and (4).

177. *Id.* at art. XI(5).

178. *Id.* at art. XII(1). If a member objects to the Commission's proposal, that member is not bound by the proposal, and the proposal binds only those member states that did not voice objections. *Id.*

179. *Id.*

180. *Id.* at art. XII(3). A Commission member must simply file a notice of intent not to be bound by a particular measure at any time after one year from the date on which the measure became effective and must give notice to the Executive Secretary of its intention not to be bound. *Id.* If that notice is not withdrawn, the measure ceases to be binding on that member one year after the date of the receipt by the Executive Secretary of the notice not to be bound. *Id.*

181. *Id.*

Second, NAFO contains limited enforcement mechanisms.¹⁸² Although Member States have the right to board and inspect the vessels of other Member States within the NAFO Regulatory Area, only the flag state (the state under whose jurisdiction the vessel operates) can prosecute and sanction vessels for violations of NAFO rules.¹⁸³ Not surprisingly, many flag states are reluctant to prosecute and sanction their own fishing vessels for violating NAFO rules.¹⁸⁴ For example, NAFO records indicate that of the forty-nine European vessels charged in 1993 with offenses such as misreporting catches or the use of illegal nets, only six were prosecuted by their flag state.¹⁸⁵

B. *The Third United Nations Conference on the Law of the Sea*

The States Parties to this Convention, . . . [r]ecognizing the desirability of establishing through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment, . . . [h]ave agreed as follows.¹⁸⁶

The 1982 Law of the Sea Convention¹⁸⁷ (1982 LOS Convention) is perhaps the preeminent global legal regime governing the marine environment.¹⁸⁸ As one commentator has stated: "The provisions

182. See Kedziora, *supra* note 7, at 1146 (stating that "NAFO's second major weakness lies in its toothless enforcement mechanisms."); WILLIAM T. BURKE, *THE NEW INTERNATIONAL LAW OF FISHERIES: UNCLOS 1982 AND BEYOND* 335-36 (1994).

183. The Northwest Atlantic Fisheries Convention states that the parties to the Convention agree to implement "a scheme of joint international enforcement." NAFO Convention, *supra* note 108, at art. XVIII. This "include[s] provision[s] for reciprocal rights of boarding and inspection by the Contracting Parties and for flag State prosecution and sanctions on the basis of evidence resulting from such boarding and inspections." *Id.*

184. Kedziora, *supra* note 7, at 1146.

185. *Id.* at 1146 (citing *Fisheries II: Canada Asks to Postpone NAFO Meeting*, GREENWIRE, Mar. 20, 1995); See Mack, *supra* note 154, at 322-23 (noting the unwillingness of flag states to prosecute their own vessels).

186. 1982 LOS Convention, *supra* note 8, in Preamble.

187. 1982 LOS Convention, *supra* note 8. As of July 25, 1997, there were 119 parties to the Convention. During 1996, twenty-seven states ratified or acceded to the Convention, which entered into force on November 16, 1994. A current list of parties to the Convention is available at <gopher://gopher.un.org:70/11/LOS/STATUS_ALL/STAT2LOS.TXT>.

188. See, e.g., Joyner, *Biodiversity*, *supra* note 30, at 656 ("The 1982 United Nations Convention on the Law of the Sea...furnishes the highest level global directives currently available for protecting and preserving biological diversity in the marine environment."); Joyner, *The 1982 LOS Convention*, *supra* note 40, at 750-51 ("The 1982 United Nations

contained in Part XII of the Convention—'Protection and Preservation of the Marine Environment'—do not merely restate existing conventional law or state practice. These articles are actually constitutional in character."¹⁸⁹ Indeed, the 1982 LOS Convention is a major contribution to the establishment of a comprehensive framework for the protection and preservation of the marine environment.

The 1982 LOS Convention was opened for signature on December 10, 1982, with 117 States as signatories.¹⁹⁰ The Convention, however, did not enter into force until 1993, eleven years after opening, when on November 16, 1993, Guyana deposited the sixtieth ratifying instrument with the Secretary General.¹⁹¹ The 1982 LOS Convention partitions the world's oceans into three jurisdictional zones: the territorial sea—a belt of sea adjacent to a coastal state not to exceed twelve nautical miles;¹⁹² the Exclusive Economic Zone (EEZ)—an area adjacent to, but extending up to two hundred nautical miles beyond, the territorial sea where the rights of the coastal nation and the rights of other nations are governed by the Convention;¹⁹³ and the high seas—which comprise all parts of the oceans that are not included in EEZs, territorial seas, or the internal waters of a state.¹⁹⁴

Much of the 1982 LOS Convention is devoted to jurisdictional issues and obligations within the two hundred nautical mile EEZs. Coastal states have two primary obligations concerning marine organisms within their EEZs. First, coastal states are to ensure, through proper conservation and management measures, that the living resources of their EEZs are not endangered by over-exploitation.¹⁹⁵ Second, coastal states are responsible for determining the allowable catch of the living resources

Convention on the Law of the Sea represents a global consensus on the fundamental rights and duties of international fisheries law.").

189. Joyner, *Biodiversity*, *supra* note 30, at 656. Joyner further states: "In this respect, Part XII embodies the first serious effort to construct and codify a public international law framework that deals with the degradation of and threat to biodiversity in the world's marine environment." *Id.* at 656–57.

190. 1982 LOS Convention, *supra* note 8, at 1261.

191. Article 308 of the Convention provides that the convention shall not enter into force until twelve months after the date of deposit of the sixtieth instrument of ratification or accession. *Id.* at 1327. See also 5 CENTER FOR OCEANS LAW AND POLICY, UNIVERSITY OF VIRGINIA, THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, 1982: A COMMENTARY 203 (Myron H. Nordquist et al. eds., 1989).

192. 1982 LOS Convention, *supra* note 8, at arts. 2–3, 21 I.L.M. at 1272.

193. *Id.* at Part V, art. 55, 21 I.L.M. at 1279.

194. *Id.* at Part VII, art. 86, 21 I.L.M. at 1286.

195. *Id.* at art. 61(2), 21 I.L.M. at 1281. A coastal state is obligated to maintain populations of harvested fisheries at levels that produce a "maximum sustainable yield." *Id.* at art. 61(3). For discussion and criticism of maximum sustainable yield and the economics of fisheries see *supra* notes 100–103 and accompanying text.

within their EEZs, and their own capacity to harvest that catch.¹⁹⁶ Plainly, coastal states are the primary regulatory authority within their respective EEZs; thus, “[w]ith regard to animals occurring in the EEZ of a State, the sovereignty of the State concerned has been explicitly established.”¹⁹⁷

i. Jurisdiction Beyond the EEZs

With regard to conservation issues beyond a state’s EEZ, the 1982 LOS Convention is considerably less forthcoming. This is an important oversight because of the migratory nature of many marine organisms. Migratory and straddling fish stocks¹⁹⁸ raise a number of jurisdictional problems concerning which State is entitled to regulate their conservation and use.¹⁹⁹ Because straddling fish and mammal stocks “straddle” the lines between the high seas and a coastal state’s EEZ, and because highly migratory stocks tend to move between various jurisdictional areas and the high seas, any conservation efforts undertaken by a coastal state within its own EEZ can be undermined by indiscriminate fishing in areas beyond the coastal state’s jurisdiction.²⁰⁰

The 1982 LOS Convention contains two articles dealing specifically with highly migratory and straddling fish stocks.²⁰¹ Under article 63, coastal states and other states fishing for migratory or straddling fishing stocks must seek to agree, either directly or through regional fisheries organizations, upon the measures necessary to ensure conservation and

196. 1982 LOS Convention, *supra* note 8, at arts. 61(1) & (2), 21 I.L.M. at 1281. A coastal state must set the permissible catch at a level that prevents over-exploitation of the harvested species. *Id.* at art. 61(2), 21 I.L.M. at 1281.

197. De Klemm, *supra* note 50, at 938 (citing 1982 LOS Convention, *supra* note 8, at art. 56).

198. Straddling fish stocks are fish stocks which tend to “straddle” jurisdictional lines, and highly migratory fish stocks are fish stocks which tend to move between various jurisdictions. *Id.* at 935–37 (discussing the status of various types of migratory species).

199. Because migratory species can exist within the EEZs of many different coastal states as well as on the high seas, they raise particularly thorny issues within the 1982 LOS Convention’s conservation framework. *See generally* De Klemm, *supra* note 50, at 935; Christopher C. Joyner & Peter N. De Cola, *Chile’s Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries*, 24 OCEAN DEV. & INT’L L. 99 (1993). A recent agreement addressing straddling and highly migratory fish stocks is discussed *infra* notes 220–233 and accompanying text.

200. *See* Donald M. McRae, *State Practice in Relation to Fisheries*, 84 AM. SOC’Y INT’L L. PROC. 283, 286 (1990) (arguing that the “benefits of effective management on the one side of a boundary may be negated by the actions of the state on the other side”); Mark Christopherson, *Toward a Rational Harvest: The United Nations Agreement on Fish Stocks and Highly Migratory Species*, 5 MINN. J. GLOBAL TRADE 357, 364–66 (1996) (stating that the nature of straddling and migratory fish stocks has made them particularly susceptible to overfishing).

201. 1982 LOS Convention, *supra* note 8, at arts. 63–64, 21 I.L.M. at 1282.

to promote the optimum utilization of these fishery stocks.²⁰² Although the Convention sets out general goals concerning straddling and migratory fish stocks, it does not provide any specific directives detailing how states are to achieve these goals.²⁰³

Articles 116 to 120 of the Convention concern the conservation and management of living resources in the high seas. Foremost is Article 116, which provides that “[a]ll States have the right for their nationals to engage in fishing on the high seas subject to: (a) their treaty obligations; (b) the rights and duties as well as the interests of coastal States.”²⁰⁴ Juxtaposed against the explicit right of States to fish on the high seas is the obligation of all States to “take measures which are designed, on the best scientific evidence available to the State concerned, to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield.”²⁰⁵ Consequently, the Convention establishes a visible tension between the need for conservation and exploitation that in some instances may hamper the effective protection of marine organisms. This tension is especially pronounced where nations pursuing conservation objectives, such as coastal states attempting to protect migratory species, compete with distant-water fishing nations who are attempting to maximize fishing returns.²⁰⁶

202. *Id.* at art. 63, 21 I.L.M. at 1282. Article 63(2) states:

Where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone, the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area.

Id. at art. 63(2), 21 I.L.M. at 1282.

203. See Kedziora, *supra* note 7, at 1141; Christopherson, *supra* note 200, at 367 (noting that the Convention does not provide any substantive rights in disputes between coastal states and fishing nations); Donald M. Grzybowski et al., *A Historical Perspective Leading Up to and Including the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks*, 13 PACE ENVTL. L. REV. 49, 55 (1995) (commenting on the failure to provide guidelines for cooperation); Shigeru Oda, *Fisheries Under the United Nations Convention on the Law of the Sea*, 77 AM. J. INT'L L. 739, 754 (1983) (arguing that the Convention has overlooked the basic problem of the allocation of these fishery resources among states).

204. 1982 LOS Convention, *supra* note 8, at art. 116, 21 I.L.M. at 1290.

205. *Id.* at art. 119, 21 I.L.M. at 1291.

206. As Joyner explains:

The management of high seas fisheries may well remain the most contentious problem for the contemporary law of the sea. Increasing national population pressures have led to intensified national fishing efforts. As foreign fishing activities have increased both within and outside EEZs, concerns over resource conservation and environmental protection have led to more restrictive allocation strategies by coastal states. Hence, there is a conflict between coastal states and distant water fishing nations.

This tension is evident in the 1982 LOS Convention's enforcement provisions. Generally, a State's capacity to enforce provisions of the Convention declines as the distance from its coast increases. For example, a coastal state's authority to enforce pollution regulations depends on both the location of the violation and the location of the offending vessel at the time enforcement is attempted.²⁰⁷ Under Article 220, when a pollution violation has occurred in a State's territorial sea, the State "may undertake physical inspection of the vessel relating to the violation and may, where the evidence so warrants, institute proceedings, including detention of the vessel."²⁰⁸ Conversely, when a coastal state believes a pollution violation has occurred outside its territorial sea, but within its EEZ, its enforcement options are limited to "requir[ing] the vessel to give information regarding its identity and port of registry, its last and its next port of call and other relevant information required to establish whether a violation has occurred."²⁰⁹

As in other substantive areas within the Convention's scope, the 1982 LOS Convention is considerably more detailed concerning the control and prevention of pollution than in the conservation of living resources. In all, the Convention devotes ten articles to the enforcement of pollution laws and controls.²¹⁰ In comparison, one article is devoted to the enforcement of a coastal state's "sovereign rights to explore, exploit, conserve and manage the living resources in the exclusive economic zone."²¹¹ This is not to say that coastal states are given insubstantial enforcement powers over living marine resources; within its EEZ a coastal state is granted extensive powers, including "boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in

Joyner, *The 1982 LOS Convention*, *supra* note 40, at 760. This tension is exacerbated by the fact that the best, and therefore most economical, fisheries exist in or near the EEZs. Territorial waters and the EEZs encompass about 40% of the world's oceans (*see* Mack, *supra* note 154, at 317), and 90% of its marine resources (*see* OUR CHANGING FISHERIES 25-29 (Sidney Shapiro ed., 1971)). In order for distant fishing states to maximize their fishing returns, they must exploit these high yield fisheries. In order for coastal states to effectively conserve their local fishing stocks, however, they must limit fishing in both their EEZ and the adjacent sea.

207. Generally, the location of the violation dictates a coastal state's ability to enforce Convention provisions. However, where a "vessel is voluntarily within a port or at an off-shore terminal of a state, that State may . . . institute proceedings in respect of any violation . . . when the violation has occurred within the territorial sea or the exclusive economic zone of that State." 1982 LOS Convention, *supra* note 8, at art. 220(1), 21 I.L.M. at 1313.

208. *Id.* at art. 220(2), 21 I.L.M. at 1313. In no event, however, may a state impose corporal punishment or imprisonment. *See* Joyner, *The 1982 LOS Convention*, *supra* note 40, at 754.

209. 1982 LOS Convention, *supra* note 8, at art. 220(3), 21 I.L.M. at 1313.

210. *See id.* at arts. 213-22, 21 I.L.M. at 1311.

211. *See id.* at art. 73, 21 I.L.M. at 1284 (Enforcement of laws and regulations of the coastal state).

conformity with this Convention.”²¹² Rather this observation is meant to highlight the need to more fully develop an enforcement framework for marine organisms similar in detail to that provided for the regulation and prevention of pollution.

This need is particularly evident where highly migratory fish and marine mammals are involved. Migratory species can exist within the EEZs of many different coastal states as well as on the high seas.²¹³ In these instances, the 1982 LOS Convention provides little definitive guidance. For example, where a species occurs within the EEZ of two or more coastal states, the 1982 LOS Convention requires that “these States shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks.”²¹⁴

Therefore, many species cannot be effectively protected without additional bilateral and multilateral agreements between coastal states. An illustrative example is pacific salmon, an anadromous species²¹⁵ that

212. *Id.* at art. 73(1), 21 I.L.M. at 1284. See also Shabtai Rosenne, *Establishing the International Tribunal for the Law of the Sea*, 89 AM. J. INT’L L. 806, 813 (1995); Joyner, *The 1982 LOS Convention*, *supra* note 40, at 753–54. In its entirety, Article 73 states:

1. The coastal State may, in the exercise of its sovereign rights to explore, exploit, conserve and manage the living resources in the exclusive economic zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.
2. Arrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security.
3. Coastal State penalties for violations of fisheries laws and regulations in the exclusive economic zone may not include imprisonment, in the absence of agreements to the contrary by the States concerned, or any other form of corporal punishment.

In cases of arrest or detention of foreign vessels the coastal State shall promptly notify the flag State, through appropriate channels, of the action taken and of any penalties subsequently imposed.

1982 LOS Convention, *supra* note 8, at art. 73(1), 21 I.L.M. at 1284.

213. Common “highly migratory” species include tuna, dolphin, sharks, and whales. See 1982 LOS Convention, *supra* note 8, annex 1, 21 I.L.M. at 1329.

214. *Id.* at art. 63(1), 21 I.L.M. at 1282 (emphasis added). These fish stocks are commonly termed “straddling stocks.” Similarly:

Where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone [i.e. the high seas], the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area.

Id. at art. 63(2), 21 I.L.M. at 1282. See also *id.* at art. 64, 21 I.L.M. at 1282 (covering the highly migratory species listed in Annex I).

215. Anadromous species spawn in freshwater and live in saltwater.

spends its juvenile stage within an individual state's territorial waters and EEZ, spends its adult life beyond that state's EEZ, and in order to reproduce returns to the same freshwater spawning grounds it left as a juvenile.²¹⁶ Clearly, the spawning coastal state has a strong interest in the management of this species and thus a compelling need to be able to enforce its conservation plans. Yet, in the case of anadromous stocks, the 1982 LOS Convention states that "enforcement of regulations regarding anadromous stocks beyond the exclusive economic zone *shall be by agreement* between the State of origin and the other States concerned."²¹⁷ Consequently, the 1982 LOS Convention provides an inadequate enforcement framework for these migratory species. Indeed, the drafters of the 1982 LOS Convention implicitly recognized this limitation by stating:

Nothing in this Part restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in this Part. States shall cooperate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management and study.²¹⁸

Thus, the drafters of the 1982 LOS Convention not only recognized the potential inadequacy of the Convention's enforcement provisions, but explicitly stated that the Convention does not stand in the way of a more comprehensive solution.

ii. United Nations Conference on Straddling Fish Stock and Highly Migratory Fish Stock

On August 4, 1995, the United Nations Conference on Straddling Fish Stock and Highly Migratory Fish Stock adopted an Agreement Relating to the Conservation and Management of Straddling and Highly Migratory Fish Stocks (Migratory Fish Stocks Agreement or

216. A recent dispute between Canada and the United States is an example of this type of conflict. In 1994, the treaty that had governed the number of migrating sockeye salmon that could be taken by Canadian and American fisherman expired, and was not renewed. Egan, *supra* note 1, at A1, A12. On July 19, 1997, Canadian fisherman blockaded an Alaskan ferry, claiming that Americans were taking more than 500,000 sockeye salmon as they swim through Alaskan waters on their way south to Canada to spawn. *See id.*

217. 1982 LOS Convention, *supra* note 8, at art. 66(3)(d), 21 I.L.M. at 1282 (emphasis added). Generally, under the Convention, States in whose rivers anadromous stocks originate do have the primary interest in and responsibility for such anadromous stocks. *Id.* at art. 66(1), 21 I.L.M. at 1282.

218. *Id.* at art. 65, 21 I.L.M. at 1282.

Agreement).²¹⁹ The Agreement is an important step towards addressing some of the deficiencies in existing international marine treaties, particularly the 1982 LOS Convention. Besides calling for the application of a precautionary approach to the conservation, management, and exploitation of straddling and highly migratory fish stocks,²²⁰ the Agreement contains significant duties of cooperation in managing marine organisms.

The Migratory Fish Stocks Agreement requires coastal states with jurisdiction over straddling or migratory fish stocks, as well as other States whose nationals fish for such stocks in the adjacent high seas, to seek, directly or through appropriate regional fisheries organizations, to cooperate in the adoption and implementation of measures necessary to conserve these stocks in the adjacent high seas.²²¹ Perhaps most significantly, only those States that are members of such organizations or that agree to abide by the conservation and management measures of such organizations shall have access to the fishery resources managed and protected by the organizations.²²² This requirement "constitutes a significant departure from the unrestricted freedom of fishing on the high seas embodied in traditional principles of fisheries law."²²³

219. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stock and Highly Migratory Fish Stock, Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, 6th Sess., U.N. Doc. A/Conf. 164/37 (1995), 34 I.L.M. 1542 (1995) [hereinafter Migratory Fish Stocks Agreement]. The stated purpose of the Agreement is to "ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions" of the 1982 LOS Convention. *Id.* at art. 2, 21 I.L.M. at 1272. As of August 5, 1997, fifteen states had ratified the Agreement, and there were fifty-nine signatories. In accordance with its Article 40, the Agreement will enter into force thirty days after the date of deposit of the thirtieth instrument of ratification or accession. *Id.* at art. 40, 21 I.L.M. at 1277. A current list of parties to the Agreement is available at <gopher://gopher.un.org:70/00/LOS/STATUS_ALL/STAT_164.TXT>.

220. The precautionary approach requires, inter alia, that States err on the side of conservation in setting fishing quotas and implementing conservation policies when scientific information is uncertain, unreliable, or incomplete. Migratory Fish Stocks Agreement, *supra* note 219, at art. 6(2). Article 6(2) states: "States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures." *Id.*

221. *Id.* at art. 7(1)(a). As part of their duty to cooperate, the Agreement requires coastal states and high-sea fishing states to become members of regional fisheries organizations or to participate in such arrangements by agreeing to apply the conservation and management measures established by such organizations or arrangements. *Id.* at art. 8(3).

222. *Id.* at art. 8(4).

223. Ambassador Satya N. Nandon of Fiji, Chairman of the United Nations Conference on Straddling Fish Stock and Highly Migratory Fish Stock, stated, "It's no longer a free-for-all situation. The freedom to fish on the high seas no longer exists as it did under the Law of the Sea Convention." Ambassador Satya N. Nandon of Fiji, Chairman of the United Nations

The Migratory Fish Stocks Agreement also seeks to improve the enforcement of management measures established by regional fisheries organizations. Similar to the enabling treaties that created NAFO and other regional fisheries organizations, the Migratory Fish Stocks Agreement places the initial burden of enforcement on the flag state.²²⁴ The flag state can police its fishing fleets through licenses and permits, and is required to monitor and control its fishing vessels through national observer programs, inspection schemes, and regional and sub-regional observer schemes including satellite transmitter tracking of fishing vessels.²²⁵

Unlike other fisheries agreements, however, the Migratory Fish Stocks Agreement does not rely solely on the flag state for enforcement:

In a significant departure from the traditional principle that only the flag state has sovereignty over its vessels, the . . . Agreement allows states which are members of regional fisheries organizations to board and inspect fishing vessels flying the flag of another state which is a party to the . . . Agreement but which is not necessarily a member of that particular fisheries organization in order to check for violations of conservation and management measures.²²⁶

The flag state can either proceed with its own investigation and enforcement or can authorize the inspecting state to conduct the

Conference on Straddling Fish Stock and Highly Migratory Fish Stock, *quoted in*, William Branigin, *Global Accord puts Curbs on Fishing: Pact Aims to Preserve Dwindling Supplies*, WASH. POST, Aug. 4 1995, at A1, A28, and *cited in* Kedziora, *supra* note 7, at 1153.

224. Migratory Fish Stocks Agreement, *supra* note 219, at art. 18(1)–(2). Moreover, the Agreement prohibits a flag state from authorizing a vessel to operate under its flag unless that state is capable of effectively managing and controlling the vessel. *Id.* at art. 18(2).

225. *Id.* at art. 18(3). In addition, the flag state has the primary responsibility for the prosecution and sanctioning of any violations committed by vessels operating under its flag. *Id.* at art. 19(1)(b).

226. Kedziora, *supra* note 7, at 1154. Article 21 states:

In any high seas area covered by a subregional or regional fisheries management organization or arrangement, a State Party which is a member of or a participant in such organization or arrangement may, through its duly authorized inspectors, board and inspect, in accordance with paragraph 2, fishing vessels flying the flag of another State Party to this Agreement, whether or not such State Party is also a member of the organization or a participant in the arrangement, for the purpose of ensuring compliance with conservation and management measures for straddling fish stocks and highly migratory fish stocks established by that organization or arrangement.

Migratory Fish Stocks Agreement, *supra* note 219, at art. 21(1). If there are reasonable grounds to believe that a fishing vessel is violating regional conservation and management measures the State inspecting the vessel must secure evidence of these alleged violations and notify the State under whose flag the ship is registered. *Id.* at art. 21(5).

appropriate investigation and to take any necessary enforcement action.²²⁷ Furthermore, if the flag state does not respond to the allegations made by the inspecting state within three working days, and if the alleged violations are classified as "serious," the inspectors may remain on board to secure evidence and may detain the vessel in port for "further investigation."²²⁸

Plainly, the Migratory Fish Stocks Agreement is a significant improvement to the present regime for the protection of straddling and highly migratory fish stocks. In addition to strengthening existing compliance and enforcement measures in regional fisheries agreements, the Migratory Fish Stocks Agreement provides a strong incentive for non-members to join regional fishery organizations. For example, shortly after the introduction of the Migratory Fish Stocks Agreement, the United States joined NAFO.²²⁹

Nevertheless, while the Migratory Fish Stocks Agreement is an important step forward, the Agreement leaves a number of problems unresolved. First, the Migratory Fish Stocks Agreement does not address the consensual nature of the regional fishery organizations.²³⁰ The Agreement relies almost exclusively on the ability of regional fishery organizations to reach agreements on common measures, quotas, and procedures. However, as discussed above, most (if not all) regional fishery organizations do not require all members to agree on rules or quotas,

227. *Id.* at art. 21(6)–(7). Furthermore, the Migratory Fish Stocks Agreement requires party states to "take measures consistent with this Agreement and international law to deter the activities of vessels flying the flag of non-parties which undermine the effective implementation of this Agreement." *Id.* at art. 33.

228. *Id.* at art. 21(8)–(11).

229. See Mack, *supra* note 154, at 322 (discussing the early failure of the United States to join NAFO). The U.S.'s reluctance to join NAFO has not escaped criticism:

Although the United States took part in negotiations surrounding NAFO's creation, it did not formally join NAFO largely because of pressure from American fishermen, who, as long as the United States was not a NAFO member, could fish in NAFO's Regulatory Area with immunity from NAFO rules and quotas. With the introduction of the [Migratory] Fish Stocks Agreement, the United States had a strong interest in joining NAFO not only to maintain its access to the high sea fisheries controlled by NAFO, but also to participate in NAFO's rulemaking and quota-setting functions.

Kedziora, *supra* note 7, at 1157.

230. Similar to the 1982 LOS Convention, and apparently in recognition of the need to strengthen regional fisheries organizations, the Agreement states:

States shall cooperate to strengthen existing subregional and regional fisheries management organizations and arrangements in order to improve their effectiveness in establishing and implementing conservation and management measures for straddling fish stocks and highly migratory fish stocks.

Migratory Fish Stocks Agreement, *supra* note 219, at art. 13.

and even allow their members to opt-out of restrictions they find disagreeable.²³¹

Furthermore, the effectiveness of the newly created enforcement procedures will largely depend on the willingness of flag states to prosecute and sanction violations of the regional fishery agreements.²³² As one commentator has noted:

Under the [Migratory] Fish Stocks Agreement, each NAFO member has the primary duty to enforce regional rules and regulations and to prosecute and sanction any violators operating under that member's jurisdiction. However, a NAFO member that opts out of a NAFO regulation will be very unlikely to fulfill its enforcement mandate under the Fish Stocks Agreement by prosecuting and sanctioning its own vessels for violating NAFO rules which, under valid NAFO procedures, no longer apply to it.²³³

iii. International Tribunal for the Law of the Sea

The newly established International Tribunal for the Law of the Sea (ITLOS) will apply and interpret the 1982 LOS Convention.²³⁴ Parties to the Convention are required to submit disputes over interpretation to the Law of the Sea Tribunal, the International Court of Justice, or to arbitration, although ITLOS has exclusive jurisdiction over deep seabed mining disputes.²³⁵ ITLOS has not yet heard its first case, but "[t]he Tribunal is expected to have an active docket."²³⁶

V. A PROPOSED SOLUTION

Although many of the agreements protecting the marine environment have set laudable objectives in the protection of marine organisms,

231. See *supra* notes 53–54 and accompanying text.

232. See Kedziora, *supra* note 7, at 1160; Mack, *supra* note 154, at 331 (noting that the Migratory Fish Stocks Agreement leaves the flag state with primary responsibility over investigation and sanctioning).

233. Kedziora, *supra* note 7, at 1160.

234. 1982 LOS Convention, *supra* note 8, at art. 15, 21 I.L.M. at 1284. The state parties elected twenty-five judges for ITLOS for staggered terms in August 1996, and they were sworn in on October 18, 1996. Judge Thomas A. Mensah of Ghana was elected its President and Judge Rudiger Wolfrum of Germany its Vice President for a period of three years. See ITLOS Press Release ITLOS/Press/1 of Oct. 5, 1996; Peter H.F. Bekker et al., *International Courts and Tribunals*, 31 INT'L LAW. 599, 607 (1997).

235. Rosenne, *supra* note 212, at 812–13.

236. David Stoelting, *International Courts Flourish in 1990s*, NEW YORK L.J., Aug. 4, 1997, at S2.

the attainment of these objectives has generally been unsatisfactory. Because the existing framework for the enforcement of international environmental agreements is insufficient to protect the marine environment, a new apparatus is necessary. The solution proposed here suggests utilizing non-governmental organizations as an aid in monitoring and enforcement under the auspices of a new international marine monitoring and coordination agency. This part begins by outlining the proposed agency's objectives, structure, and sources of information. Next, potential enforcement mechanisms are examined. Finally, this section discusses the many benefits that would accompany the creation of an international marine monitoring and coordination agency with comprehensive jurisdiction.

A. *An International Marine Monitoring and Coordination Agency*

The lack of a centralized supranational authority is often cited as the crucial barrier to effective environmental protection and management.²³⁷ For the most part, current intergovernmental organizations (IGOs) with marine jurisdiction have been limited to circumscribed regions and subjects.²³⁸ Even with this limitation, however, IGOs still "play an indispensable role in the creation and enforcement of international law."²³⁹ Any proposed solution must recognize the indispensable role of IGOs and, as suggested here, NGOs.²⁴⁰

The author proposes a new agency: an international marine monitoring and coordination agency (IMMCA). The IMMCA should have several clearly defined objectives:

1. *Serve as a repository for data and information on marine organisms*: Using the latest computerized imaging, storing, and cataloging techniques, the IMMCA should develop a

237. See sources cited *supra* note 33.

238. See discussion *supra* Part IV.A.

239. *Institutional Arrangements*, *supra* note 18, at 1586 (citing F. MORGENSTERN, LEGAL PROBLEMS OF INTERNATIONAL ORGANIZATIONS 1 (1986) and A. BENNETT, INTERNATIONAL ORGANIZATIONS 14-15 (3d ed. 1984)). For example, "[a]lmost every major environmental treaty was initiated by an IGO." *Institutional Arrangements*, *supra* note 18, at 1587. In addition, many IGOs serve as secretariats for treaties. See *id.* at 1587; Scarff, *The International Management of Whales, Dolphins, and Porpoises: An Interdisciplinary Assessment*, 6 ECOLOGY L.Q. 326, 354-57 (1977).

240. An NGO is a "private international organization that serves as a mechanism for cooperation among private national groups in international affairs." THE INTERNATIONAL LAW DICTIONARY 77 (Robert L. Bledsoe & Boleslaw A. Boczek eds., 1987). NGOs have also been described as private organizations "not established by a government or by intergovernmental agreement which are capable of playing a role in international affairs by virtue of their activities." Hermann H.K. Rechenberg, *Non-Governmental Organizations*, 9 ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 276 (1986).

system for the solicitation and acceptance of data and information from IGOs, NGOs, and state entities.

2. *Actively monitor the conservation status of marine organisms within its jurisdiction:* This requires standardized, systematized, and ongoing procedures for the collection of data. Standard monitoring and measuring techniques must be established in order to ensure legitimacy.
3. *Assess compliance:* Within the framework of the relevant conservation treaties, the IMMCA should develop standard evaluation techniques for determining if parties are in compliance. In addition, a process should be established for the resolution of disputes brought by complaining parties and parties found to be in non-compliance.
4. *Disseminate information:* The IMMCA should ensure that its data and information, as well as its determinations of compliance, are made available to the widest audience. In addition, a process for compilation and a standardized method of presentation should be developed in order to facilitate statistical analyses.
5. *Serve as coordinator and catalyst for other IGOs and NGOs:* Recognizing the indispensable role of IGOs and NGOs, the IMMCA should establish institutional arrangements for continuous cooperation between relevant governmental, intergovernmental, and non-governmental organizations.

The IMMCA's institutional structure and implementing mechanisms should reflect these purposes.

i. Jurisdictional Issues

It is essential that the IMMCA be given the widest possible jurisdiction. This will provide a number of benefits, including greater efficiency, reduction in the proliferation of international bodies, and an increased potential for integrated and comprehensive global protection.²⁴¹ The author recognizes that initially this may not be politically feasible; but however modestly it begins, as the IMMCA establishes its legitimacy, the objective should be to incorporate as many marine agreements as possible under its jurisdiction. This jurisdictional grant

241. See, e.g., *Assent and Enforcement*, *supra* note 11, at 1578 ("[I]nternational environmental agencies are more successful when they have a wider scope of activity."). These benefits are discussed more fully *infra* Part V.D.

can be accomplished through the IMMCA's implementing document, the amendment of existing marine agreements, and the grant of authority to the IMMCA in future marine treaties.²⁴²

Furthermore, the creation of an organization such as the IMMCA is expressly allowed under the 1982 LOS Convention. The 1982 LOS Convention provides:

Nothing in this Part restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in this Part. States shall cooperate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management and study.²⁴³

ii. Informational Issues

The IMMCA should be granted the explicit authority to determine the compliance of parties to the agreements under its jurisdiction. Few international organizations have explicit authority to monitor and assess compliance, but such authority has been written into some standard setting resolutions.²⁴⁴ There are at least three potential means of acquiring the information necessary for the IMMCA to assess compliance: active acquisition of data by the IMMCA itself, regular auditing of data and information from party states themselves, and passive acquisition from other IGOs and NGOs.

242. Current international law requires that states must explicitly agree to the creation of a supranational body before it can be established, and that existing agreements must be amended in order to bind the parties to those agreements. See Abram Chayes & Antonia H. Chayes, *Adjustment and Compliance Processes in International Regulatory Regimes*, in PRESERVING THE GLOBAL ENVIRONMENT 280, 308 (Jessica T. Mathews ed., 1991); A.S. Feshchenko, *Phenomenon of Supranationality in Activities of International Organizations*, 1987 SOVIET Y.B. INT'L L. 170-71; Oran R. Young, *The politics of international regime formation: managing natural resources and the environment*, 43 INT'L ORG. 349, 360-61 (1989). Consequently, existing treaties must be amended if the IMMCA is to have a role in their enforcement.

243. 1982 LOS Convention, *supra* note 8, at art. 65, 21 I.L.M. at 1282.

244. See, e.g., Convention on the Intergovernmental Maritime Consultative Organization, Mar. 6, 1948, art. 3, para. (a), art. 16, para. (i), 9 U.S.T. 621, 624, 627; Constitution of the International Labour Organisation, June 28, 1919, art. 405, 49 Stat. 2712, 2722-24, T.I.A.S. No. 874, at 12; Statute of the International Atomic Energy Agency, Oct. 26, 1956, art. III, 8 U.S.T. 1093, 1096, T.I.A.S. No. 3873, at 4, 276 U.N.T.S. 3, 6; see also *Institutional Arrangements*, *supra* note 18, at 1606 ("such authority has often been written into the original resolutions adopting standards"); MORGENSTERN, *supra* note 239, at 125-27 (discussing the use of this power by the UN General Assembly, the International Labour Organization, and the World Health Organization).

First, the IMMCA can itself actively acquire the information necessary to assess compliance. This can be accomplished through a regular inspection program or through inspections that are instituted on the basis of suspected violations. There are a number of existing marine agreements that ostensibly require some form of regular inspections, including, *inter alia*, the Migratory Fish Stocks Agreement,²⁴⁵ Protocol on Environmental Protection of the Antarctic,²⁴⁶ the Convention on the Conservation of Antarctic Marine Living Resources;²⁴⁷ and although not actually an "international agreement," the U.S. Driftnet Monitoring and Assessment Act.²⁴⁸

Active inspection as the result of suspected violations also has precedent in existing international agreements. For example, the World

245. Migratory Fish Stocks Agreement, *supra* note 219, at art. 18(3) (requiring party states to monitor and control their fishing vessels through both national observer programs and inspection schemes as well as regional and sub-regional observer schemes including satellite transmitter tracking of fishing vessels).

246. Antarctic Protocol, *supra* note 140 (providing that inspections of stations, installations, equipment, ships, and aircraft should be carried out to protect the Antarctic environment and to ensure protocol compliance).

247. See Joyner, *Biodiversity*, *supra* note 30, at 672 (noting that among the policies adopted by the CCAMLR Commission is a fishing vessel inspection program). For a discussion of the CCAMLR and the CCAMLR Commission, see *supra* notes 162-186 and accompanying text.

248. Driftnet Impact Monitoring, Assessment, and Control Act, 16 U.S.C. § 1822 (1994) [hereinafter Monitoring Act] (requiring international negotiations to assess the impact of driftnetting on marine mammals). Under pressure from the U.S., a number of foreign fishing fleets agreed to place scientific observers on their vessels:

The actions of the United States in threatening sanctions under the Driftnet Monitoring and Assessment Act resulted in agreements that placed scientific observers on driftnetting vessels. The data collected by these observers allowed the international community to conclude that the concerns about the destructive effects on many species of marine life being voiced by the opponents of large-scale driftnetting were justified.

Jenkins, *supra* note 41, at 215. See also Monitoring Act § 4004(a) (allowing sanctions for failure to agree to monitoring and to U.S. scientific observers on board driftnet vessels). U.S. and Canadian fisheries officers regularly perform on board monitoring. For example, the Northern Pacific Fisheries Management Council requires on board monitoring to ensure compliance with its quotas. Benjamin and Weiss note that:

A major problem anticipated by the regulators is that of "high-grading"—dumping low-value fish at sea so that higher value fish may be landed and recorded without exceeding the quota. Monitoring of discarded by-catch is carried out by observers on board the fishing vessel. These were originally put on board to measure by-catch so that it would be figured into the total allowable quota. However, this information has become increasingly important for enforcement, and the observers have become subject to more or less subtle psychological pressure and sometimes to offers of bribes.

Antonio Herman Benjamin & Charles Weiss, Jr., *Economic and Market Incentives as Instruments of Environmental Policy in Brazil and the United States*, 32 TEX. INT'L L.J. 67, 95 (1997).

Bank Inspection Panel (Inspection Panel), comprised of three inspectors, was established to provide "people directly and adversely affected by a [World] Bank financed project with an independent forum through which they can request the Bank to act in accordance with its own policies or procedures."²⁴⁹ Once a request for review is received, the Inspection Panel undertakes a study of the problem and notifies World Bank management of any potential problems within three weeks.²⁵⁰ The World Bank is required to respond to the Inspection Panel's findings within twenty-one days.²⁵¹ One commentator has remarked that the World Bank Inspection Panel "has not yet been heavily tested and will almost certainly have difficulties considering its small size," but went on to state that "the idea behind it appears sound so long as the panel remains independent and non-superficial."²⁵²

Incorporation of some form of analogous investigative mechanisms in the IMMCA would provide an effective means of monitoring compliance as well as a strong incentive for States to provide accurate and timely data on their own fishing and whaling operations.²⁵³ Unlike regular inspection procedures, however, active investigation often entails an adversarial inquiry. Therefore, it is critical that the IMMCA's implementing documents expressly authorize adversarial inspections and clearly lay out the procedures to be followed.²⁵⁴ However, "[e]ven absent such authority, world opinion might be effectively mobilized to induce an accused state to accept an investigation once a credible charge is made."²⁵⁵

A second way the IMMCA can acquire the information necessary to assess compliance is through regular auditing of data and information submitted by party states themselves.²⁵⁶ Under such a program, States

249. INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT, THE INSPECTION PANEL 4-5 (1994).

250. *Id.* at 9-12.

251. *Id.* at 21.

252. Anderson, *supra* note 11, at 817.

253. In an analogous situation, the establishment of human rights complaint procedures and inspections have significantly aided the enforcement of international human rights law. See, e.g., Markus G. Schmidt, *Individual Human Rights Complaints Procedures Based on United Nations Treaties and the Need for Reform*, 41 INT'L & COMP. L.Q. 645 (1992).

254. See HENRY G. SCHERMER, INTERNATIONAL INSTITUTIONAL LAW § 1253, at 694-95 (1980); see also *Institutional Arrangements*, *supra* note 18, at 1607 (adversarial investigation "is usually thought to require express authorization in the institution's charter or by agreement of the members"). Currently, several IGOs are similarly authorized. Schermer, *supra*, §§ 1246-1251, at 692-94, §§ 1256-1270, at 695-706.

255. See *Institutional Arrangements*, *supra* note 18, at 1607.

256. Many current agreements already require some form of reporting duty on the part of participating states. Under the Migratory Fish Stocks Agreement, for example, participating states must keep detailed statistics on total catches by fleet, including records of fish length, weight, and sex. Migratory Fish Stocks Agreement, *supra* note 219, at Annex I, arts.

would periodically report their current catch statistics, the position of their fishing and whaling fleets, and an assessment of their own compliance.²⁵⁷ The IMMCA would then audit these reports to ensure their accuracy as well as performing an independent assessment of each party state's compliance.²⁵⁸ Analogous systems of information exchange are already required by the 1982 LOS Convention²⁵⁹ and by other international agreements.²⁶⁰

3(1)(a) & 3(2)(a). The International Convention for the Regulation of Whaling requires States to communicate statistical data about their catches to the International Bureau of Whaling Statistics. ICRW, *supra* note 16, at art. 10(a)–(e) (requiring information on date of taking, place, species, sex, and length).

257. In fact, most countries currently maintain most, if not all, of these statistics in order to perform economic analyses and to regulate their fleets. *See, e.g.*, 50 C.F.R. § 600.45 (1996) (requiring that the National Oceanic and Atmospheric Administration collect and maintain fisheries statistics). *Cf.* David M. Driesen, *The Congressional Role in International Environmental Law and its Implications for Statutory Interpretation*, 19 B.C. ENVTL. AFF. L. REV. 287, 305 n.115 (1991) (“The United States regulates its own fleet very carefully to avoid taking porpoises.”) (citing *Balelo v. Baldrige*, 724 F.2d 753 (9th Cir. 1984) (upholding regulation requiring vessel owners to consent to placement of observers on their boats who could collect data for use in civil or criminal penalty proceedings)).

258. An independent assessment of compliance is needed because, based on past practices, some States will be reluctant to submit accurate catch statistics. *See, e.g.*, U.N. Food and Agricultural Organization, Fisheries Technical Paper No. 337, WORLD REVIEW OF HIGHLY MIGRATORY SPECIES AND STRADDLING STOCKS 24 (1994) (noting that only five of the top sixteen tuna-catching countries reported catch statistics to the FAO in 1991). The 1991 U.S. General Accounting Office Survey, GENERAL ACCOUNTING OFFICE, INTERNATIONAL ENVIRONMENT: INTERNATIONAL AGREEMENTS ARE NOT WELL MONITORED, GAO/RCED 92–43 (1992), and the 1992 study conducted for the United Nations Conference on Environment and Development (UNCED) on the Effectiveness of International Environmental Agreements, UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT, THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS 12–15 (Peter H. Sand ed., 1992), found only a small proportion of states rigorously complied with reporting requirements.

259. Article 119—Conservation of the Living Resources of the High Seas, requires that:

Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks *shall be contributed and exchanged on a regular basis* through competent international organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned.

1982 LOS Convention, *supra* note 8, at art. 119(2) (emphasis added), 21 I.L.M. at 1291. *See also* Joyner, *The 1982 LOS Convention*, *supra* note 40, at 756 (“The U.S. government is supposed to exchange scientific data and catch information with other states.”).

260. For example, the International Labor Organization currently monitors compliance under various multilateral conventions. Shihata, *supra* note 11, at 47; *see also* Peter H. Sand, *International Cooperation: The Environmental Experience*, in PRESERVING THE GLOBAL ENVIRONMENT 236, 273–76 (Jessica T. Mathews ed., 1991); *Institutional Arrangements*, *supra* note 18, at 1606 (“In such schemes, states regularly report on their compliance, and IGOs then audit these reports to ensure their accuracy.”).

A third potential means for the IMMCA to acquire information is from other IGOs and NGOs. IGOs, such as the Northwest Atlantic Fisheries Organization and the Northeast Atlantic Fisheries Commission, and NGOs, such as Sea Shepherd Conservation Society and Greenpeace, may be the most cost effective information sources available to the IMMCA. Indeed, aggressive NGOs have been instrumental in documenting many recurring violations of international marine agreements. For example:

[d]uring January 1990, . . . Greenpeace, using marine scientists, photographers, translators, scuba divers, and a skilled crew were able to obtain the first ever documentation of the impacts of [driftnet fishing]. We observed over 16 species of fin fish, sharks and marine mammals dead and dying in the driftnets, including extremely rare species.²⁶¹

Unlike most governmental agencies, these organizations are independently funded, leanly staffed, and well suited for monitoring the marine environment.²⁶²

Assuming appropriate funding, it is certainly possible for the IMMCA to acquire data and information under all three proposed methods. Recognizing that sufficient funding may not be available—at least initially—the most cost effective methods of information acquisition appear to be regular auditing of data and information from party states themselves, and passive acquisition from other IGOs and NGOs. Nevertheless, because the IMMCA's ability to monitor and assess compliance is contingent upon accurate, complete, and timely information, it would be advantageous to provide institutional mechanisms within the IMMCA to allow it to utilize as many information sources as possible.²⁶³

261. High Seas Driftnet Fishing: Hearing before the National Ocean Policy Study of the Senate Committee on Commerce, Science, and Transportation, 102nd Cong., 1st Sess. 45 (1991) (statement of Ben Deeble). The Sea Shepherd Conservation Society has similarly "infiltrat[ed] heavily guarded docks in Kaosiung, Taiwan, [and] counted 40 new or refurbished boats, [and] another 27 [refitted] for driftnetting." *The Modern-Day Mariner Who Gives Piracy a Good Name*, INDIANAPOLIS STAR, Aug. 30, 1992, at F3.

262. See, e.g., Jenkins, *supra* note 41, at 217–18 ("Environmental activist groups have been important in documenting the existence of this pirate [whaling and fishing] industry."); *Institutional Arrangements*, *supra* note 18, at 1607 ("NGOs routinely investigate and publicize complaints of noncompliance."); cf. Adam M. Gee, *Debt for Nature Swaps: The Past, the Present, and the Future*, at 16 (unpublished manuscript, on file with the author) ("The local NGO may be first to know if their government is violating conditions of the debt for nature swap.").

263. Indeed, it is widely recognized that "[e]nvironmental policy-making is only as good as its primary scientific information system." SHINN, *supra* note 159, at 124.

iii. Issues Regarding the Determination of Party Compliance

The IMMCA should also develop standard evaluation techniques for determining if parties are in compliance with the relevant marine agreements under its jurisdiction. In practical terms, the parameters of the IMMCA's compliance assessment procedure will likely be dictated by each individual marine treaty, leaving the IMMCA with little discretion in formulating assessment criteria. This is not problematic because the purpose of the IMMCA is not to dictate substantive standards; that is left to party states and to the diplomatic/political processes of the international community. Instead, the IMMCA's role is to ensure that marine treaties will be implemented and that determinations of compliance can be made. Because the IMMCA is not empowered to promulgate standards, its decisionmaking will more likely be regarded as unbiased. Toward this end, it is critical that the IMMCA's compliance assessment process be perceived as legitimate.²⁶⁴

In order to enhance legitimacy, party states and relevant non-state actors should be made fully aware of the IMMCA's decisionmaking process and the specific criterion used to determine their compliance. In addition, the assessment process must be perceived as fair. In the international arena, fairness requires that affected parties be given the opportunity for meaningful participation.²⁶⁵ As has been noted by others, "[t]o the extent that IGO decisionmaking procedures provide affected parties with an opportunity to participate meaningfully, the procedures will be considered more legitimate and the standards they produce will have greater credibility and thereby greater force."²⁶⁶

An essential component of this participation is the provision of dispute resolution procedures.²⁶⁷ However, it is probably not feasible or necessary to create a formal adjudicative body within the IMMCA.²⁶⁸

264. See *Institutional Arrangements*, *supra* note 18, at 1604 ("[S]tates and individuals are more likely to comply with IGO decisions when they perceive IGO processes and the rules they produce to be legitimate.").

265. See JERRY L. MASHAW, *DUE PROCESS IN THE ADMINISTRATIVE STATE* 177-80 (1985); *cf.* Sands, *supra* note 61, at 399-401 (discussing NGO participation as a source of legitimacy).

266. *Institutional Arrangements*, *supra* note 18, at 1600. See also Thomas M. Franck, *Legitimacy in the International System*, 82 AM. J. INT'L L. 705, 706 (1988) ("[I]n a community organized around rules, compliance is secured—to whatever degree it is—at least in part by perception of a rule as legitimate by those to whom it is addressed.").

267. See Abdulbar Al-Gain, *Agenda 21: The Challenge of Implementation*, in *A LAW FOR THE ENVIRONMENT* 21, 30-31 (Alexandre Kiss & Françoise Burhenne-Guilmin eds., 1994).

268. One reason an adjudicative body within the IMMCA is not necessary is because current international adjudicative structures should be able to provide some relief to aggrieved parties, particularly if current standing requirements are relaxed. See *infra* Part V.B.

Instead, the IMMCA should adopt procedures modeled on the U.S. Administrative Procedure Act (APA).²⁶⁹ The APA provides procedures for formal notice, comment, and a petition process that can be modified to suit an international context. The IMMCA should establish procedures for notification when a party state, or its nationals, is found to be in non-compliance. The non-complying state, as well as any other interested parties, would then be given a set period of time to comment on the IMMCA decision. Although the IMMCA would not be obligated to heed the comments, it should be required to consider them.²⁷⁰ In addition, the IMMCA should develop procedures to allow States, IGOs, and NGOs to petition or file a complaint in order to have the IMMCA declare a State in non-compliance.²⁷¹ The IMMCA would again provide formal notice and a subsequent comment period. Thus, regardless of whether the IMMCA ultimately changes its decision, both mechanisms should increase the perceived legitimacy of its decisionmaking process.

iv. Information Dissemination Issues

A primary purpose of the IMMCA should be to disseminate information and to act as a clearinghouse for other IGOs and NGOs. Access to the IMMCA by IGOs and NGOs can contribute to strengthening environmental commitment below the state level, and thus provide an additional layer of accountability.²⁷² Furnishing information to IGOs and NGOs will also provide reciprocal benefits: by reducing their costs for gathering and analyzing information, the IMMCA can enable these organizations, particularly NGOs, to spend more resources on gathering information, conducting publicity campaigns, directing

269. 5 U.S.C. §§ 551–706 (1994). *See also Institutional Arrangements, supra* note 18, at 1603 (suggesting that a model method for ensuring public participation is the U.S. Administrative Procedure Act).

270. Under the APA, U.S. courts do review agency decisions in light of the comments received. *See, e.g., Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 413–16 (1971); *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974).

271. Such a procedure would be similar to the APA, which allows individuals to petition agencies for changes in regulations. *See* 5 U.S.C. § 553(e)(1994).

272. *See Assent and Enforcement, supra* note 11, at 1577 (concluding that providing NGOs with “greater access would also create an additional accountability network that would encourage the development of environmental policy”); P. LOWE & J. GOYDER, ENVIRONMENTAL GROUPS IN POLITICS 7–85 (1983) (discussing the role of environmental groups in national politics). Moreover, “[t]his phenomenon may be more relevant at present to the less developed countries which also lack strong internal mechanisms for self enforcement, such as influential NGOs provide.” Shihata, *supra* note 11, at 39. For a discussion of the many other benefits of NGO participation *see* discussion *infra* Part V.B(ii).

political pressure, and engaging in other enforcement techniques.²⁷³ In fact, many existing environmental agreements already contain extensive programs for NGO participation and access.²⁷⁴ The Convention for the Conservation of Antarctic Marine Living Resources, for example, strongly encourages the participation of NGOs and IGOs.²⁷⁵ Under the Convention on the Trade in Endangered Species (CITES) regime NGOs are allowed to attend and participate at CITES meetings.²⁷⁶ Similarly, the UN Economic and Social Council permits NGOs to attend meetings, submit short written statements, be granted hearings, and propose agenda items.²⁷⁷

Finally, it is essential that the IMMCA establish institutional arrangements that foster and provide for continuous cooperation between States, IGOs, and NGOs. Indeed, the importance of coordination and collaboration cannot be overstated.²⁷⁸ Almost every international agency deals with environmental issues, at least peripherally.²⁷⁹ Many of these

273. See *Assent and Enforcement*, *supra* note 11, at 1564–65 (stating that “international agencies can lower the costs for these actors, and in so doing raise the probability that they will become involved in the enforcement process”).

274. For a detailed discussion of NGOs and their increasingly valuable role in international law, see Steve Charnovitz, *Two Centuries Of Participation: NGOs and International Governance*, 18 MICH. J. INT’L L. 183 (1997).

275. CCAMLR, *supra* note 141, at art. XXIII(2). See also Kaye, *supra* note 162, at 87 (“Another unusual feature of CCAMLR is the level to which it encourages the participation of nongovernmental organizations (NGOs) and intergovernmental organizations (IGOs).”).

276. Convention on the Trade in Endangered Species of Wild Fauna and Flora, *opened for signature* Mar. 3, 1973, 993 U.N.T.S. 243.

277. E.S.C. Res. 1296, 44 U.N. ESCOR, 44th Sess., Supp. No. 1, at 21, 22, U.N. Doc. E/4548 (1968). See also WILLIAMS, *supra* note 127, at 261–62.

278. See *Institutional Arrangements*, *supra* note 18, at 1580 (“Effective international environmental agreements must therefore establish institutional arrangements for continuous cooperation.”); Lynton K. Caldwell, *Beyond Environmental Diplomacy: The Changing Institutional Structure of International Cooperation*, in INTERNATIONAL ENVIRONMENTAL DIPLOMACY 13 (John E. Carroll ed., 1988); Chayes, *supra* note 35, at 2. In addition, Shihata argues:

Continuous cooperation among national agencies through direct, permanent contacts has been instrumental in the success of many environmental agreements. Establishing permanent networks to operate as channels of communication and verification should serve as an effective way to ensure compliance with the monitoring requirements of international environmental agreements under present conditions. The agreements can facilitate the task by increasingly empowering national agencies (both governmental and non-governmental) to carry out such functions, thus ensuring the “self-enforcement” of treaty obligations.

Shihata, *supra* note 11, at 46.

279. See Harold K. Jacobson & David A. Kay, *A Framework for Analysis*, in ENVIRONMENTAL PROTECTION: THE INTERNATIONAL DIMENSION, 1, 13 (David A. Kay & Harold K. Jacobson eds., 1983); *Institutional Arrangements*, *supra* note 18, at 1582 (stating that “[a]lmost every IGO deals with environmental issues, whether exclusively, substantially, or as a by-product of its other responsibilities”) (citations omitted).

agencies, as well as numerous NGOs, deal specifically with marine issues.²⁸⁰ Moreover, countless domestic governmental agencies make environmental decisions that have international ramifications.²⁸¹ Each of these organizations offers some degree of expertise and political influence that can be valuable in the protection of the marine environment.

B. Potential Enforcement Mechanisms

As discussed above, the IMMCA should not be empowered to directly render enforcement. This will provide a number of important benefits. First, the IMMCA can remain focused on the dual roles of monitoring and assessing compliance. Second, valuable institutional resources will not be consumed by what is oftentimes a speculative endeavor. Third, the IMMCA will avoid problems of bias associated with active enforcement. Fourth, the international community's acceptance of the IMMCA's findings should provide party states with the necessary legitimacy and "political cover" to take a more active role in enforcement themselves, thus obviating the need for the IMMCA to provide enforcement. Finally, other organizations, particularly NGOs, are better suited to provide enforcement.

In some instances, mere publication of an IMMCA finding of non-compliance might provide the impetus for a non-compliant state to change its conduct. This type of response by a non-compliant state has been called "shame" compliance. Indeed, "[f]ew nations like to be regarded as international pariahs and shame as a sanction ought not to be underestimated."²⁸² Even if a State does not ultimately modify its be-

280. Examples discussed in this article include, inter alia, the International Whaling Commission, International Maritime Organization, CCAMLR Commission, Northwest Atlantic Fisheries Organization, and the Sea Shepherd Conservation Society.

281. See *Institutional Arrangements*, *supra* note 18, at 1582 (noting that "dozens of domestic governmental agencies have jurisdiction over environmental issues on which decisions are made at the international level"); *Id.* at 1582 n.18 ("From 1970 to 1980, the number of nations with environmental agencies increased from ten to nearly one hundred.") (citing A. Feraru, *Environmental Actors*, in ENVIRONMENT AND THE GLOBAL ARENA 43, 50 (K. Dahlberg et al. eds., 1985)).

282. Palmer, *supra* note 71, at 281. See also LOUIS HENKIN, HOW NATIONS BEHAVE 97-98 (1974); Anderson, *supra* note 11, at 812 (noting that "'shame compliance' has proven to be an effective enforcement provision given adequate public exposure to the problem"). One commentator posits that:

In environmental law, the goal is to obtain compliance before the environment is harmed, not after the harm has occurred. Monitoring and reporting are helpful compliance techniques because in a decentralized system, as Oran Young explains, reputation assumes greater importance. "'Soft responsibility' based on monitoring and reporting is increasingly used for compliance control, particularly as it 'allows states that are prepared to co-operate in dealing with a problem to do so without unduly restricting their freedom of action.'"

havior, "the force of international opinion virtually requires nonconforming states to put forth reasons—even if based on notions of sovereignty—for their non-observance."²⁸³ This "culture of compliance" can be an important tool for the IMMCA and the international community to use to pressure noncomplying states to alter their conduct²⁸⁴ and to keep states from taking actions in contravention of agreements in the first place.²⁸⁵

i. Enforcement by Party States

Should more subtle methods of enforcement prove ineffective, IMMCA determinations of noncompliance will likely provide party states with the necessary legitimacy and "political cover" to take a more active role in enforcement. This type of enforcement can take the form of either unilateral or multilateral action by party states. Although multilateral action may be politically preferable to unilateral action, unilateral action is often easier to institute, swifter, and more decisive.²⁸⁶ Unilateral action is more feasible where the international community

O'Connell, *supra* note 11, at 56 (citing Oran Young, *Compliance in the International System*, in *INTERNATIONAL LAW: A CONTEMPORARY PERSPECTIVE* 99, 101 (Richard Falk et al. eds., 1985), and quoting Martti Koskenniemi, *Breach of Treaty or Non-Compliance? Reflections on the Enforcement of the Montreal Protocol*, 3 *Y.B. INT'L ENVTL. L.* 123, 127-28 (1992)).

283. *Institutional Arrangements*, *supra* note 18, at 1605. See also Chayes & Chayes, *supra* note 242, at 290-91.

284. Indeed, the UN has been very successful in utilizing diplomatic and public pressure to induce compliance:

The lack of enforcement power by the UN is well known and is often used by skeptics to criticize not only the UN, but public international law in general. Although the UN cannot order or control member states, it does wield significant power by using diplomatic pressure and public opinion to induce compliance from states seeking legitimacy in the international arena. This "culture of compliance" is extremely significant in that it results in states conforming their behavior even when it may be contrary to their short-term interests.

Catherine Tinker, *Environmental Planet Management by the United Nations: An Idea Whose Time Has Not Yet Come?*, 22 *N.Y.U. J. INT'L L. & POL.* 793, 796 n.10 (1990) (citation omitted).

285. Compare *Adams v. Vance*, 570 F.2d 950, 956 n.13 (1977), in which the U.S. argued it should not be required to object to an IWC decision because:

[I]argely as a result of United States leadership—and pressure—no country has objected to a quota established by the International Whaling Commission since 1973 It is possible that an objection by the United States at this time could lead to a cycle of objections by others which would damage the effectiveness of the established quota system. If this should ensue, a number of whale species would soon face extinction.

286. See Richard B. Bilder, *The Role of Unilateral State Action in Preventing International Environmental Injury*, 14 *VAND. J. TRANSNAT'L L.* 51, 79-83 (1981).

recognizes that a clear transgression has occurred.²⁸⁷ In this respect, the IMMCA can be instrumental in credibly establishing that a noncomplying state has indeed transgressed. Moreover, the mere threat of unilateral action may be sufficient to compel States to honor their treaty obligations. As one scholar has remarked: "Rigid law strictly interpreted conveys threats effectively."²⁸⁸

There are also a number of ways that party states can provide for the enforcement of existing international marine agreements. Under the 1982 LOS Convention, States have the right—and the obligation—to enforce both international law and domestic law within their EEZs.²⁸⁹ In addition, a State can provide enforcement extraterritorially by (1) creating *domestic* legislation pursuant to international agreement, which it subsequently enforces outside its territorial boundaries,²⁹⁰ or (2) enforcing existing *international* standards outside its territorial boundaries.²⁹¹

Few international agreements protecting marine organisms, however, contain explicit enforcement mechanisms; thus, party states must often create enforcement mechanisms through domestic legislation. In recognition of this, many marine agreements obligate parties to "adopt appropriate measures" to ensure compliance.²⁹² Even when no obligation is stated, the need to implement international agreements often implies an obligation that party states adopt subsequent enforcement measures on their own. For example, although the United Nations Resolution establishing a moratorium on driftnet fishing is non-binding, it specifically "encourages all members . . . to take measures individually and collec-

287. Cf. Michael L. Burton, *Legalizing the Sublegal: A Proposal for Codifying a Doctrine of Unilateral Humanitarian Intervention*, 85 GEO. L.J. 417, 446–47 (1996) (discussing the advantages of a UN resolution providing guidance on the use of unilateral humanitarian intervention).

288. Driesen, *supra* note 13, at 304. Professor Driesen concluded that the U.S. threat of unilateral action played an important role in the negotiations of the 1978 International Conference on Tanker Safety and Pollution, and noted that "[t]he success of the [U.S.] strategy probably depended in part upon other nations' belief that the United States would carry out its threat." *Id.* at 304.

289. See *supra* notes 191–197 and accompanying text.

290. Regulation in this context can actually take two forms: legislation and adjudication. See generally *Extraterritorial Regulation*, *supra* note 23, at 1612–24. See also *supra* note 82.

291. For example, in March 1995, Canadian ships seized and impounded a Spanish fishing trawler and cut the nets of another Spanish boat for alleged violations of international quotas and regulations governing the fishing of Greenland Halibut in the international waters of the North Atlantic. Clyde H. Farnsworth, *When They Talk About Fish, the Mellow Canadians Bellow*, N.Y. TIMES, Mar. 31, 1995, at A11. See generally Kedziora, *supra* note 7.

292. See, e.g., Lima Convention, *supra* note 135, at art. 3(1) (obligating parties to "take all appropriate measures" to ensure compliance); Antarctic Protocol, *supra* note 140, at art. 13(1) (leaving enforcement to each contracting party but obligating each party to take "appropriate measures" to ensure compliance); see *supra* Part IV.A.

tively, to prevent large-scale pelagic drift-net fishing operations on the high seas."²⁹³ No country has been more active in this regard than the United States.²⁹⁴

As previously noted, individuals, rather than state actors, are the perpetrators of an increasing proportion of violations of international law; this is particularly true with marine law violations.²⁹⁵ Accordingly, because most nations' domestic enforcement mechanisms are already equipped to deal with individual and corporate entities, these enforcement procedures should be considered for use in the present context. Indeed, domestic courts already enforce a significant portion of international law.²⁹⁶

Most domestic courts have some expertise in environmental subject matter and are well suited to adjudicate the fact specific determinations that are necessary to rule on issues of compliance.²⁹⁷ Perhaps most importantly, these courts can exercise the necessary jurisdiction over assets and persons which is essential for effective enforcement. Moreover, many of these courts can issue injunctions, which may prevent violations from occurring.

The simplest way for a domestic court to enforce international law is by enforcing domestic law that implements international law. As discussed in Part II of this article, international agreements ordinarily go through demanding domestic ratification processes and, because many are not self-executing, require domestic implementing legislation before

293. United Nations: General Assembly Resolution on Large-Scale Pelagic Driftnet Fishing and its Impact on the Living Marine Resources of the World's Oceans and Seas, G.A. Res. 46/215, U.N. GAOR, 47th Sess., 31 I.L.M. 241 (1992).

294. The United States has enacted considerable legislation aimed at enforcing international marine conservation agreements. *See, e.g.*, Tuna Conventions Act of 1950, 16 U.S.C. §§ 951-961 (1994); Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544 (1994); 1971 Pelly Amendment to the Fishermen's Protective Act, 22 U.S.C. § 1978 (1994); Atlantic Tuna Convention Act of 1975, 16 U.S.C. § 971 (1994); Magnuson Fishery Conservation and Management Act of 1979, 16 U.S.C. § 1821 (1994); Lacey Act Amendments of 1981, 16 U.S.C. §§ 3371-3378 (1994); Marine Mammal Protection Act, 16 U.S.C. § 1371 (1994); Driftnet Impact, Monitoring, Assessment and Control Act of 1987, 16 U.S.C. § 1822 (1994); Driftnet Act Amendments of 1990, 16 U.S.C. § 1826 (1994); International Dolphin Conservation Act of 1992, 16 U.S.C. §§ 1411-1418 (1994).

295. *See supra* notes 114-116 and accompanying text.

296. *See* O'Connell, *supra* note 11, at 57 ("The idea of expanding the use of domestic courts for international environmental law enforcement against citizens and governments of other countries is a more recent and interesting concept."). *See also* F.A. Mann, *International Delinquencies Before Municipal Courts*, in *STUDIES IN INTERNATIONAL LAW* 336 (1973).

297. *See* O'Connell, *supra* note 11, at 57-58 ("The use of domestic courts makes particular sense in the environmental area because domestic courts tend to focus on the most common polluters—individuals and corporations.").

they can be enforced.²⁹⁸ Thus, after becoming a party to these agreements, party states, through their legislatures, adopt laws that apply to the state's citizens or territory.²⁹⁹

Nevertheless, regardless of the precise origin of the underlying substantive standard being enforced, States still face the difficult task of projecting a legitimate enforcement power beyond their borders. As discussed previously, if a State exercises jurisdiction beyond its borders, this assertion of jurisdiction will in many instances impinge on the sovereignty of another State.³⁰⁰ However, this problem does not exist in all instances, and may be minimized by the creation of the IMMCA. For example, the tension between competing sovereigns is substantially reduced when the enforcing state is regulating its own nationals pursuant to an international agreement; this is evident in the 1982 LOS Convention which obligates States to regulate their nationals regardless of where a violation occurs.³⁰¹ Similarly, this tension could be further reduced if party states give the IMMCA jurisdiction to assess compliance, and enforcement is predicated on an IMMCA finding of non-compliance by the offending party. Finally, the conflict between com-

298. See *supra* notes 62–66 and accompanying text. For example, the Convention on the International Trade in Endangered Species, *supra* note 276, bans the export and import of certain endangered species. Under the CITES regime, party states must, through domestic law, create controls on their citizens who wish to import or export endangered animals. See generally Michelle Ann Peters, Comment, *The Convention on International Trade in Endangered Species: An Answer to the Call of the Wild?*, 10 CONN. J. INT'L L. 169 (1994).

299. O'Connell, *supra* note 11, at 58 ("A court enforcing such laws might not mention the treaty, but the treaty is implicitly being enforced."). Some domestic legal systems also allow the direct enforcement of international law, without prior implementation through their national legislature. See *id.* The U.S. Supreme Court has said:

International law is part of our law, and must be ascertained and administered by the courts of justice of appropriate jurisdiction, as often as questions of right depending upon it are duly presented for their determination. For this purpose, where there is no treaty, and no controlling executive or legislative act or judicial decision, resort must be had to the customs and usages of civilized nations; and, as evidence of these, to the works of jurists and commentators who by years of labor, research and experience, have made themselves peculiarly well acquainted with the subjects of which they treat.

The Paquete Habana, 175 U.S. 677, 700, 20 S.Ct. 290, 299 (1900).

300. See *supra* Part II.B.

301. 1982 LOS Convention, *supra* note 8, at art. 217, 21 I.L.M. at 1312 (mandating that "[s]tates shall ensure compliance by vessels flying their flag or of their registry with applicable international rules and standards Flag states shall provide for the effective enforcement of such rules, standards, laws and regulations, irrespective of where a violation occurs"). See also *id.* at art. 117, 21 I.L.M. at 1291 ("All states have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas."); Antarctic Protocol, *supra* note 140, at art. 2 (requiring each party to exercise enforcement powers over their flag ships and over ships supporting that government's Antarctic operations).

peting sovereigns fully evaporates on the high seas, where no other sovereign can, or does, claim jurisdiction.³⁰²

Once the IMMCA has found a party state, or its nationals, to be in non-compliance, States have a number of enforcement mechanisms, including: diplomatic pressure; adjudication in the recently created International Court of Justice Chamber for Environmental Matters³⁰³ or other court of international jurisdiction; economic sanctions; and trade restrictions. Additionally, a State may potentially choose to utilize more "direct" forms of enforcement such as intervention by its coast guard³⁰⁴ or naval forces.³⁰⁵ For instance, in early 1993, the U.S. State Department announced that "if U.S. enforcement authorities have 'reasonable grounds' to believe any foreign flag vessel is conducting or has conducted large scale driftnet fishing . . . U.S. authorities will take appropriate 'law enforcement' action in accordance with agreements."³⁰⁶ True to its word, in May 1993, the U.S. Coast Guard intercepted two Chinese vessels beyond the United States EEZ, believed to be violating the UN moratorium on driftnet fishing, and ordered them to return to China.³⁰⁷

ii. Enforcement by NGOs

Perhaps, the most cost effective enforcement available to the international community is enforcement by NGOs. In many situations,

302. For a discussion of the underlying principles justifying the extraterritorial application of domestic laws, see *supra* notes 74 and 82.

303. See Constitution of a Chamber of the Court for Environmental Matters, I.C.J. Communique No. 93/20, July 19, 1993.

304. Rear Admiral James C. Card, Chief of the Office of Marine Safety, Security, and Environmental Protection of the U.S. Coast Guard, remarked:

The Coast Guard has long been a proponent of achieving a comprehensive and stable regime with respect to the uses of the oceans. . . . The Coast Guard, as the primary U.S. actor operating in the maritime arena, strives to promote stewardship of the marine environment—the central component in providing for long-term environmental quality. With a fleet of vessels and aircraft extending our influence through the exclusive economic zone (EEZ) and beyond, the Coast Guard is uniquely positioned to promote compliance with the [1982 LOS] Convention as we perform our stewardship mission.

James C. Card, *Implementing the United Nations Convention on the Law of the Sea: A Coast Guard Perspective*, 7 GEO. INT'L ENVTL. L. REV. 725, 728 (1995).

305. See generally Christopher A. Donesa, *Protecting National Interests: The Legal Status of Extraterritorial Law Enforcement by the Military*, 41 DUKE L.J. 867, 869 (1992) (noting that in some instances the "use of military resources abroad can be a legal exercise of enforcement jurisdiction").

306. *U.S. Says It Will Enforce Driftnet Fishing Moratorium*, REUTER ASIA-PACIFIC BUS. REP., March 8, 1993, available in LEXIS, Asiapc Library, Reuapb File.

307. *Coast Guard Sends Second Chinese Driftnetter Home*, REUTERS, LTD., May 20, 1993, available in LEXIS, News Library Ttxtnews File.

enforcement by private entities such as international environmental organizations can be more persuasive than the more conventional governmental approach.³⁰⁸ This is so because NGOs are not restricted by international politics or by formalistic predetermined protocols.³⁰⁹ Groups such as the Sea Shepherd Conservation Society, Greenpeace, World Wildlife Fund, and the Natural Resources Defense Council can address issues swiftly and without the necessity of navigating bureaucratic channels. In addition, because these organizations are independently funded they can focus limited financial resources on discrete issues and are less susceptible to domestic political pressures associated with more formal funding sources.³¹⁰

An IMMCA finding of noncompliance can be instrumental in providing international legitimacy to NGO enforcement procedures. Furthermore, unlike party states who are sometimes concerned about retaliation, NGOs are essentially "politically independent," and thus generally more aggressive enforcers of international norms and standards.³¹¹ Consequently, NGOs are capable of utilizing a number of enforcement techniques, including: focusing and directing public pressure; organizing boycotts; bringing complaints to international authorities; and taking direct action against violators.

NGOs are particularly well suited for focusing and directing public pressure against states that violate international norms and standards.³¹²

308. See Charnovitz, *supra* note 274, at 274 (noting the ways "NGOs can help governments secure . . . implementation of new treaties"); Spencer, *supra* note 111, at 122 ("Often a private entity, such as an international environmental organization, is more effective than a more formal governmental approach.").

309. See Spencer, *supra* note 111, at 122. NGO activities, however, have received some criticism:

More often than not, NGOs have been able to avoid the political paralysis of governments in advancing their causes. They are "one-note Charlies" that serve a special interest and have both the advantages—and afflictions—of tunnel vision. As their star is rising, they are filling voids left by retreating governments. In some cases, NGOs have even become involved in traditional government activities, such as standard-setting, regulating and policing.

Crocker Snow, Jr., *NGO Overreach: Greenpeace Pours Oil on Troubled Waters But Can't Clean It Up*, 21 FLETCHER F. WORLD AFF. 161 (1997).

310. Cf. Samaan, *supra* note 11, at 274 (noting that "[i]nternational agencies are neither shackled by international politics or influenced by political pressures, since, for the most part, they are generally privately funded").

311. See Charnovitz, *supra* note 274, at 274–75 ("NGOs may enhance the accountability of governments by monitoring negotiating efforts. NGOs can also press compromises upon reluctant negotiators. . . . NGOs may strengthen international agreements by monitoring governmental compliance.").

312. See, e.g., Sands, *supra* note 61, at 394 (noting that NGOs "have been active for many years in identifying threats to the environment, in attempting to force governments to

A media savvy NGO with a network of grassroots volunteers can swiftly "get the word out" about a State's transgressions.³¹³ Moreover, "[w]here governments might be loathe for political reasons to censure each other, the public feels no such compunction."³¹⁴ As the international public has become more sensitive to environmental issues, governments appear to be responding to that sensitivity.³¹⁵ For example, Japanese Fisheries Minister Takashi Sato has acknowledged, while addressing Japan's whaling policies, that "[i]f Japan's action to pursue research whaling becomes a big issue and if criticism becomes accelerated, we will reconsider our decision at that stage."³¹⁶

Not surprisingly, NGOs have been quite successful at capitalizing on the fact that public officials are particularly sensitive to publicity. Because of their ability to mobilize public support, NGOs are often essential to the creation and functioning of international environmental regimes.³¹⁷ For instance, NGOs were instrumental in initiating the first truly worldwide campaign to stop the slaughter of whales.³¹⁸ "By

take measures to protect the environment, and in signaling breaches of existing international environmental regulations").

313. As Captain Paul Watson of the Sea Shepherd Conservation Society has instructed: "Learn to use the media or you will be abused by the media. Media manipulation is merely a matter of survival in a media culture." PAUL WATSON, *EARTHFORCE: AN EARTH WARRIOR'S GUIDE TO STRATEGY* 36 (1993). See generally HERBERT MARSHALL MCLUHAN, *LAWS OF MEDIA: THE NEW SCIENCE* (1988).

314. Spencer, *supra* note 111, at 123.

315. See Samaan, *supra* note 11, at 274. See generally LYNTON K. CALDWELL, *BETWEEN TWO WORLDS: SCIENCE, THE ENVIRONMENTAL MOVEMENT AND POLICY CHOICE* (1990). As then-UN Secretary General Boutros-Ghali explained in 1994: "Non-governmental organizations are a basic form of popular representation in the present day world. Their participation in international organizations is, in a way, a guarantee of the political legitimacy of those international organizations." Statement by UN Secretary General Boutros Boutros-Ghali, reprinted in "THE CONSCIENCE OF THE WORLD"; *THE INFLUENCE OF NON-GOVERNMENTAL ORGANISATIONS IN THE UN SYSTEM* 311-12 (Peter Willetts ed., 1996).

316. *Whale Pearl Harbor: U.S. Efforts to Keep Japan from Violating International Whaling Moratorium*, NAT'L REV., Apr. 1, 1988, at 22 ("Though they were willing to interpret the treaty loosely so long as no one was watching, the Japanese are clearly less enthusiastic about losing face.").

317. See *Institutional Arrangements*, *supra* note 28, at 1600-01 (observing that NGOs "are often essential to the enactment of domestic implementing legislation"). For example, the Convention on the Regulation of Antarctic Mineral Resource Activities, June 2, 1988, 27 I.L.M. 859, agreed to after six years of negotiations between thirty-three States, collapsed due to the opposition of Jacques Cousteau and NGOs such as Greenpeace, the Environmental Defense Fund, and the Wilderness Society. *Institutional Arrangements*, *supra* note 28, at 1600 n.173. See also Paul Bogart, *Antarctic Accord Must Protect Environment*, N.Y. TIMES, Oct. 24, 1989, at A26.

318. "In the 1960's, NGOs launched a worldwide publicity campaign to save the whales." Cliff M. Stein, *Whales Swim for Their Lives as Captain Ahab Returns in a Norwegian Uniform: An Analysis of Norway's Decision to Resume Commercial Whaling*, 8 TEMP. INT'L & COMP. L.J. 155, 178 n.241 (1994) (citing RICHARD ELLIS, *MEN AND WHALES* 435 (1991)).

presenting revealing news stories and graphic videos, the NGOs brought the whaling issue to the attention of the global public and virtually changed the history of whaling.³¹⁹

NGOs have been especially effective at using their own form of economic sanction—the boycott.³²⁰ In the past, NGOs have successfully used boycotts to protect the marine environment, particularly marine mammals.³²¹ In 1986, for example, NGOs organized a boycott against tuna companies to pressure them to stop using drift and gill nets to catch tuna.³²² NGOs also published dramatic, full page advertisements in major newspapers and released a documentary film showing graphic scenes of marine mammals being slaughtered.³²³ Today, tuna sellers assure the public their tuna is dolphin-safe and “some tuna companies ask NGOs to certify their tuna products as dolphin safe.”³²⁴

NGO enforcement could be further enhanced if international environmental organizations are given standing in national courts and international tribunals.³²⁵ Currently, individuals and NGOs are precluded from bringing citizen suits asserting environmental injuries in most adjudicative forums.³²⁶ Moreover, individual citizens completely lack standing in the International Court of Justice.³²⁷ Providing standing for NGOs to address environmental wrongs can be accomplished in two ways: enlarging the jurisdiction of current international tribunals such as

319. *Id.* at 178 n.241 (citing RICHARD ELLIS, *MEN AND WHALES* 435 (1991)).

320. “[I]f [a boycott] can affect as little as 5 percent of sales, it can destroy the vast majority of a company’s profits.” Tom Sietsema, *Ready, Aim, Boycott*, S.F. CHRON., Feb. 24, 1993, at 1.

321. See Stein, *supra* note 319, at 179 (“NGOs have had success using boycotts to protect marine mammals from commercial slaughtering.”). For example, “[i]n response to Norway’s decision to resume commercial whaling, NGOs have called for public and corporate boycotts of Norwegian products and services.” *Id.* at 179. As a result of these boycotts, it is estimated that Norway lost at least US\$58.5 million in export revenue and tourism income. *Boycott of Norwegian Fish Products Starts in Australia*, AGENCE FRANCE-PRESSE, Aug. 16, 1993, available in 1993 WL 10757619. See also *Economic Sanction Needed to Halt Norwegian Whaling*, *Environmentalists Say*, INT’L ENV’T REP. (BNA), Nov. 19, 1992.

322. Sietsema, *supra* note 320, at 1/ZZ1. NGOs organized massive letter-writing campaigns targeted at congressional members and corporate leaders. *Id.* at 1/ZZ1.

323. *Id.* at 1/ZZ1.

324. See Stein, *supra* note 319, at 179 (citing Sietsema, *supra* note 320, at 1/ZZ1).

325. See *Assent and Enforcement*, *supra* note 11, at 1577; Sands, *supra* note 61, at 414–17 (arguing that flexible standing requirements would facilitate enforcement of supranational rules).

326. See generally Christopher D. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972); Christopher D. Stone, *Should Trees Have Standing? Revisited: How Far Will Law and Morals Reach? A Pluralistic Perspective*, 59 S. CAL. L. REV. 1 (1985).

327. See Tinker, *supra* note 284, at 807 n.58; Samaan, *supra* note 11, at 276 (noting that “citizen suits concerning environmental injuries and duties may not be brought since individual citizens lack standing in the International Court of Justice”).

the ICJ,³²⁸ or by granting NGOs standing in domestic courts through domestic implementing legislation.³²⁹ In either forum, NGOs can be expected to bring many violators to justice.³³⁰

Finally, creation of the IMMCA can be a significant aid to those NGOs that are currently engaged in the day to day monitoring and enforcement of international environmental laws. IMMCA findings of noncompliance will provide these NGOs with the legitimacy necessary to take direct action against violating states and their nationals.

C. *Benefits of an International Marine Monitoring and Compliance Agency*

The creation of an International Marine Monitoring and Coordination Agency will yield a number of potential benefits, including: providing more cost effective protection of the marine environment by lowering information and administrative costs; increasing the likelihood that treaties will be signed; increasing the likelihood that parties will remain in treaties; encouraging compliance; reducing the proliferation of international bodies; and providing comprehensive global protection of the marine environment.

First, the IMMCA will provide more cost effective protection by lowering information costs and administrative costs. By developing monitoring procedures and acting as a repository for information concerning the marine environment, the IMMCA can lower the information gathering and processing costs³³¹ incurred by States, NGOs, and other

328. Some have suggested creating an environmental chamber within the ICJ with broad jurisdiction. *Global News: International Court of the Environment Foundation*, 6 IJO NEWSLETTER (Int'l Judicial Observer, Washington, D.C.), June 1994, No. 2. The creation of alternative dispute resolution panels has also been suggested. American Bar Association Working Group on Improving the Effectiveness of the United Nations, *Report on Improving the Effectiveness of the United Nations in Advancing the Rule of Law in the World*, 29 INT'L LAW 293, 295-96 (1995); Anderson, *supra* note 11, at 805 ("To safeguard our remaining natural resources, nations must be more willing to forgo part of their sovereignty by agreeing to resolve environmental claims before arbitration panels or to submit to the jurisdiction of the International Court of Justice (ICJ).").

329. If party states are required to "adopt measures" necessary to ensure compliance, as most agreements currently require, it is logical that those measures should include some means for NGOs and individuals to compel errant actors to comply. See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 402 (1987). Extraterritorial jurisdiction includes "judicial jurisdiction" which is commonly described as a nation's authority to "subject persons or things to the process of its courts or tribunals." *Id.* at § 401(b).

330. See Sand, *supra* note 260, at 271-73; *Institutional Arrangements*, *supra* note 18, at 1607 (noting that "[i]n the formalized European Community complaint procedures, NGOs bring many of the strongest complaints against member-states").

331. Economist George Stigler has remarked that "information costs are the costs of transportation from ignorance to omniscience, and seldom can a [person] afford to take the entire trip." George J. Stigler, *Imperfections in the Capital Market*, 75 J. POL. ECON. 287,

international organizations. Because the IMMCA will actively analyze and disseminate information, it will also lower the information costs of party states and NGOs engaged in enforcement activities.³³² In addition, by centralizing monitoring efforts and facilities, States will reduce redundant expenditures and thus reduce overall information related expenditures.

Second, the IMMCA will increase the likelihood that treaties will be signed. Many States are reluctant to enter treaties because of the perceived relinquishment of their sovereignty. Where the IMMCA is the arbiter of compliance, however, a potential state should anticipate less "interference" with its sovereignty because no one State or small group of States is determining another State's compliance. In addition, assuming the IMMCA has created adequate participation mechanisms, the international community will likely regard the IMMCA's decision process as legitimate;³³³ this will provide assurance to potential party states that they will be treated fairly.

Third, the IMMCA will also increase the likelihood that parties will remain in treaties and comply with their existing treaty obligations. Through its active information dissemination procedures, the IMMCA can establish links with grassroots organizations and political constituencies that can nurture an environmental ethic within individual states and their national governments.³³⁴ In addition, IMMCA links with local political organizations can help mitigate problems concerning domestic

291 (1967). See also Carl Dahlman, *The Problem of Externality*, 22 J.L. & ECON. 141, 148 (1979) (suggesting that transaction costs include: (1) search and information costs; (2) bargaining and decision costs; and (3) policing and enforcement costs). Dahlman indicates, however, that "this functional taxonomy of different transaction costs is unnecessarily elaborate: functionally, the three classes reduce to a single one—for they all have in common that they represent resource losses due to lack of information." *Id.* at 148. See generally Armen Alchian & Harold Demsetz, *Production, Information Costs and Economic Organization*, 62 AM. ECON. REV. 777 (1972).

332. Cf. *Assent and Enforcement*, *supra* note 11, at 1564 ("By gathering, analyzing, and distributing environmental data, international agencies can lower the costs of these actors, and in so doing raise the probability that they will become involved in the enforcement process.").

333. See *supra* Part V.A(iii).

334. See Charnovitz, *supra* note 274, at 274–75 ("NGOs may enhance the accountability of governments by monitoring negotiating efforts. NGOs can also press compromises upon reluctant negotiators. . . . NGOs may strengthen international agreements by monitoring governmental compliance."); *Assent and Enforcement*, *supra* note 11, at 1573 ("By maintaining contacts with environmentalists and experts, the agencies can influence national policy from within the state, working with and within national governments to train officials and foster an environmental ethic."); cf. *Traffic in Women and Children: Report on the International Women's Associations*, League of Nations Doc. C.T.F.E 234 (1925), at 6 (noting that without well-organized, well-equipped social organizations, legislators would find it impossible to apply protective laws which are being asked for).

implementation and compliance. "Public awareness and cooperation, as opposed to coercive enforcement, are the foundation of many environmental policies."³³⁵

Fourth, the IMMCA will reduce the proliferation of international bodies and reduce overlapping institutional structures. As previously noted, the number of international organizations is remarkable.³³⁶ Not surprisingly, these organizations' environmental activities often overlap.³³⁷ The current understaffed, over-bureaucratized system hampers the effective implementation and enforcement of international environmental agreements. Because the IMMCA will consist of one body performing monitoring and compliance functions, many levels of bureaucracy within the current system can be replaced. The creation of an international compliance and monitoring agency may be particularly timely in light of current reform efforts at the United Nations.³³⁸ Moreover, the IMMCA would be fully capable of performing the duties required by most environmental treaties: "[u]nder the disjointed legal mechanisms currently in place, treaty secretariats act independently despite the fact that they often share similar mandates, perform similar functions, and require similar institutional arrangements."³³⁹

Finally, creation of the IMMCA is an important step toward a comprehensive global solution for the problems facing the marine environment—and the world's environment as a whole. The importance of global cooperation and coordination in the creation and

335. *Institutional Arrangements*, *supra* note 18, at 1601.

336. *See supra* Part IV.A.

337. *See Jacobson & Kay*, *supra* note 279, at 9–13.

338. David Birenbaum, former ambassador of the United States to the United Nations for Management and Reform, summarized the present situation at the UN as follows:

Organizational reform is indispensable. The U.N. system's current complicated structure, much of it put in place by the member states, defies effective management, defeats accountability, ensures wasteful duplication of effort and robs the organization of critically needed resources. For example, more than 150 separate bodies report to the Economic and Social Council. There are 12 bodies concerned with oceans and coasts, eight with agriculture and food, seven with forests, six with fresh water, eight with the environment, seven with health and six with nutrition.

A new emphasis on performance requires the wholesale consolidation of functions, elimination of redundant or irrelevant bodies and programs, reorganization of the Secretariat into fewer departments, a reduction in the number of undersecretaries and assistant secretaries-general, creation of a deputy secretary general with a reform and management mandate, and a far more effective means of getting the U.N. and its specialized agencies to function as a system.

David Birenbaum, *Threshold of Options for U.N. Reforms*, WASHINGTON TIMES, Feb. 10, 1997, at A13.

339. Anderson, *supra* note 11, at 781.

implementation of environmental agreements cannot be overemphasized. The current "patchwork" system of jurisdiction and responsibility fails to recognize the interconnectedness of the earth's living and non-living systems. The IMMCA is especially necessary because many marine organisms are migratory and, as history has borne out, only a comprehensive organization can effectively coordinate the actions of all nations. Assuming that at some point the IMMCA will have monitoring responsibility for all of the world's oceans and marine life, this will assure that information is available for the integration and coordination of conservation objectives.³⁴⁰

CONCLUSION

The lack of a centralized supranational authority is often cited as the crucial barrier to effective environmental protection. Ecosystems, individual species, and pollution do not respect political boundaries; why should pirate whalers and driftnetters respect them? They do not because they know they can continue to ply their trade without fear of sanction. The condition of the world's oceans is startling. As important as the few conservation victories have been (such as dolphins and some whale species), the fact remains that there is no international system in place that can effectively conserve marine organisms.

The proposed International Marine Monitoring and Coordination Agency attempts to rectify this deficiency. Although the solution suggested here may be subject to criticism, the reasons for adopting such an approach outweigh the objections, particularly in the absence of more viable alternatives. Compared to other proposals, the IMMCA is a modest solution. The IMMCA will not create laws nor will it directly pressure individual states to create laws or to comply with their existing

340. The acute need for the integration and coordination of conservation objectives within the UN was recently highlighted by the Secretary General:

Institutional arrangements for ocean management remain fragmented, however, with problematic divisions of responsibility between areas under national jurisdiction and international waters. It is also evident that, while important agreements have been concluded at the global level, implementation will be better addressed at the regional level, where the management mandate and capacity of existing organizations needs strengthening.

Report of the Secretary General, *Overall Progress Achieved Since The United Nations Conference On Environment And Development*, E/CN.17/1997/2 (Jan. 31, 1997). See also Anderson, *supra* note 11, at 782 ("The establishment of a new international environmental oversight body could catalyze the consolidation of basic environmental principles and the resolution of the difficulties currently plaguing the international environmental legal structure.").

obligations. Instead, the IMMCA will monitor, assess, and open its processes, decisionmaking, and conclusions to the public.

It is this author's opinion that the future success of environmental protection lies in strengthening the role of autonomous non-governmental organizations. Many NGOs have broad support from the citizens of many countries. They are "in tune" with individual preferences and able to influence individual desires. If the average Japanese, Taiwanese, Norwegian, American, and Russian can not be persuaded to change, then no amount of international regulation is ultimately going to succeed in keeping "pirates" from exploiting the oceans. In this regard, the IMMCA is well suited. Its information dissemination procedures recognize that grassroots NGOs can educate and influence. In the end, this form of public participation sidesteps the difficult issue of state sovereignty.

Certainly, one of the criticisms of the proposed IMMCA is that the international community will never allow a supranational authority to have such broad jurisdiction. The truth, however, may be just the opposite; supranational organizations already exist in the form of the UN Security Council and the growing European Union.³⁴¹ These supranational authorities are accepted because "world peace" and "economic prosperity" are considered important enough to justify the relinquished sovereignty. Environmental issues must be elevated to the same status.

341. Instead of pulling apart, nations appear to be seeking "economic allies" in the form of super-regional trade agreements. *See, e.g.*, General Agreement on Tariffs and Trade, *opened for signature* Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194; North American Free Trade Agreement, Dec. 17, 1992, 32 I.L.M. 605. Indeed, as evidenced by the debate surrounding the North American Free Trade Agreement, proponents see these super-regional agreements as critical for economic prosperity.