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Answering “The Call of the Wild”: An Examination of U.S. Participation in International Wildlife Law

Gary D. Meyers*
Kyla Seligsohn Bennett**

The date *may* come when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny. The French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor [see Louis XIV’s Code Noir]. It may come one day to be recognized, that the number of the legs, the villosity of the skin, or the termination of the os sacrum, are reasons equally insufficient for abandoning a sensitive being to the same fate.¹

Introduction

For a number of reasons — ethical, social, economic, and biological — the protection of wildlife is a particularly appro-

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1. J. BENTHAM, INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 235-236 (1789), *cited in*, C.D. STONE, EARTH AND OTHER ETHICS: THE CASE FOR MORAL PLURALISM 34 (1987), to support the proposition that as human cultures mature, rights are constantly expanded from a narrow segment of society to include new members as rights holders and that there is no reason this expansion must be limited to the human animal community.

priate subject for international law and regulation. First, wildlife plays an important role on our planet and in the lives of humans. Animals provide many people with food, labor, clothes, protection, and companionship. Some animals, like the leech, are valued for medicinal uses. Non-human animals also provide scientists with insights into human behavior and physiology.² Furthermore, the preservation of genetic diversity is fast becoming a goal of many nations.³ Not only is the presence of wildlife an indicator of global health, but there is a strong relationship between diversity of species and ecological stability.⁴ Second, many species of wildlife migrate across human geographic boundaries. Thus, one country's use of a species can adversely affect another country's use and enjoyment of the same species. Finally, there is significant international economic interest in wildlife. For example, in 1980 the United States imported close to one billion dollars worth of wildlife and wildlife products.⁵ Unfortunately, this high-volume trade endangers the survival of many species.⁶ When live wildlife is transported for distribution to pet stores and zoos, an estimated ninety percent does not survive the trip.⁷ It is also estimated that millions of species will become extinct in the coming decades because of the combined effects of habitat destruction and trade.⁸

This article surveys the international wildlife laws and treaties that are in force today. In Part I, the various approaches used to regulate the taking, use, and protection of

2. See, e.g., E.O. WILSON, *SOCIOBIOLOGY* (1978).

3. See WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE* 147 (1987) [hereinafter *OUR COMMON FUTURE*], in which the authors note that conservation of wildlife and wildlife habitat is crucial for development in the Third World, and note further that this conservation is on the agenda of many governments.

4. Schonfeld, *International Trade in Wildlife: How Effective is the Endangered Species Treaty?*, 15 CAL. W. INT'L L.J. 111, 114-15 (1985).

5. Melak, *Regulation of International Trade in Endangered Wildlife*, 1 B.U. INT'L L.J. 249, 252 (1982).

6. Schonfeld, *supra* note 4, at 112.

7. Melak, *supra* note 5, at 253.

8. Comment, *The Convention on International Trade in Endangered Species: No Carrot, But Where's the Stick?*, 17 ENVTL. L. REP. 10222, 10222-23 (1987).

wildlife are examined. The problems associated with the individual treaty approaches are also discussed. In Part II, general solutions to the wildlife protection dilemma are considered, as are recommendations for strengthening particular treaties. The discussion is limited to treaties and conventions to which the United States is a party. Furthermore, treaties and conventions relating solely to fish are not discussed due to the considerable number of them in existence⁹ and because other authors have addressed this vast topic in great depth.¹⁰

9. Conservation of Atlantic Tunas, May 14, 1966, 20 U.S.T. 2887, T.I.A.S. No. 6767, 673 U.N.T.S. 63; Convention on Fishing and Conservation of the Living Resources of the High Seas, April 29, 1958, 17 U.S.T. 138, T.I.A.S. No. 5969, 599 U.N.T.S. 285; Amended Agreement for the Establishment of an Indo-Pacific Fisheries Council, Nov. 23, 1961, 13 U.S.T. 2511, T.I.A.S. No. 5218, 418 U.N.T.S. 348; Convention for the Establishment of an Inter-American Tropical Tuna Commission, May 31, 1949, 1 U.S.T. 230, T.I.A.S. No. 2044, 80 U.N.T.S. 3; International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952, 4 U.S.T. 381, T.I.A.S. No. 2786; Amendment to the International Convention for the High Seas Fisheries of the North Pacific Ocean, April 25, 1978, 30 U.S.T. 1095, T.I.A.S. No. 9242; Convention for the Conservation of Salmon in the North Atlantic, March 2, 1982, T.I.A.S. No. 10789; Agreement Concerning Fisheries Off the Coasts of the United States, Sept. 22, 1983, United States-Bulgaria, T.I.A.S. No. 10816; Agreement adopting, with certain modifications, the rules and methods of procedure recommended in the award of September 7, 1910, of the North Atlantic Coast Fisheries Arbitration, July 20, 1912, United States-United Kingdom, 37 Stat. 1634, T.S. No. 572; Convention for the Extension to Halibut Fishing Vessels of Port Privileges on the Pacific Coasts of the United States of America and Canada, March 24, 1950, United States-Canada, 1 U.S.T. 356, T.I.A.S. No. 2096; Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea, March 2, 1953, United States-Canada, 5 U.S.T. 5, T.I.A.S. No. 2900; Convention on Great Lakes Fisheries, Sept. 10, 1954, United States-Canada, 6 U.S.T. 2836, T.I.A.S. No. 3326; Amendment to the Convention on Great Lakes Fisheries, April 5 and May 19, 1967, United States-Canada, 18 U.S.T. 1402, T.I.A.S. No. 6297; Agreement Concerning Fishing Off the West Coast of Canada, March 29, 1979, 30 U.S.T. 4067, T.I.A.S. No. 9448; Agreement Concerning Fisheries Off the Coasts of the United States, April 13, 1983, United States-German Democratic Republic, ____ U.S.T. ____, T.I.A.S. No. 10687; Agreement Concerning Fisheries Off the Coasts of the United States, July 26, 1982, United States-Republic of Korea, ____ U.S.T. ____, T.I.A.S. No. 10571; Convention Regarding Navigation, Fishing, and Trading on the Pacific Ocean and Along the Northwest Coast of America, April 17, 1824, United States-USSR, 8 Stat. 302, T.S. 298; Fisheries, Feb. 21, 1973, United States-USSR, 24 U.S.T. 1588, T.I.A.S. No. 7663; Fisheries, Feb. 26, 1975, United States-USSR, 26 U.S.T. 167, T.I.A.S. No. 8022; Fisheries Off the United States Coasts, Nov. 26, 1976, United States-USSR, 28 U.S.T. 1847, T.I.A.S. No. 8528; Reciprocal Fisheries Agreement, March 27, 1979, United States-United Kingdom, ____ U.S.T. ____, T.I.A.S. No. 10545.

10. See Nafziger, *Global Conservation and Management of Marine Mammals*,

Part I

Most treaties and conventions can be classified into one of two schemes: regulatory or prohibitory. Regulatory schemes permit the taking of wildlife, but limit the numbers, sex, or ages of animals that can be taken, or proscribe the times of year that animals can be taken.¹¹ Prohibitory schemes generally ban the taking of certain species, or ban the taking of groups of animals living in a particular area.¹² However, all prohibitory schemes currently contain exceptions to the ban on takings.¹³ These exceptions may seem narrow at first glance, but often open the door to abuse.

Initially, this article examines those wildlife laws and treaties that are purely regulatory, and then progresses to an examination of those that are a combination of regulatory and prohibitory schemes. Lastly, those laws and treaties that are primarily prohibitory are discussed. In each instance, the effectiveness of the particular treaty is considered.

A. *Multilateral-Whaling Regulation*

A number of conventions regulate whaling. For example, the first convention, the Convention for the Regulation of

17 SAN DIEGO L. REV. 591, 598 (1980); Comment, *The Ghosts of Fishing Nets Past: A Proposal for Regulating Derelict Synthetic Fishing Nets*, 63 WASH. L. REV. 677 (1988); Jacobson, *International Fisheries Law in the Year 2010*, 45 LA. L. REV. 1161 (1985); Evans, *Toward the Return of Pacific Salmon and Steelhead*, 16 ENVTL. L. 359 (1986); Flory, *Recent Development: Construing the Pelly and Packwood-Magnuson Amendments: The D.C. Circuit Court Harpoons Executive Discretion*, 61 WASH. L. REV. 631 (1986); Jensen, *The United States-Canada Pacific Salmon Interception Treaty: An Historical and Legal Overview*, 16 ENVTL. L. 363 (1986); Comment, *The Exclusive Economic Zone: Its Development and Future in International and Domestic Law*, 45 LA. L. REV. 1269 (1985); Kalo, *Water Pollution and Commercial Fishermen: Applying General Maritime Law to Claims for Damages to Fisheries in Ocean and Coastal Waters*, 61 N.C.L. REV. 313 (1983); McLean and Sucharitkul, *Fisheries Management and Development in the EEZ: The North, South, and Southwest Pacific Experience*, 63 NOTRE DAME L. REV. 492 (1988); Jones, *Harvesting the Ocean's Resources: Oil or Fish?*, 60 S. CAL. L. REV. 587 (1987).

11. Convention for the Regulation of Whaling, Sept. 24, 1931, 49 Stat. 3079, T.S. No. 880, 155 L.N.T.S. 349 [hereinafter Multilateral-Whaling Regulation].

12. See, e.g., *infra* note 101, art. III.

13. See, e.g., Convention for the Conservation of Antarctic Seals, June 1, 1972, art. 4, 29 U.S.T. 441, T.I.A.S. No. 8826 [hereinafter Antarctic Seal Convention].

Whaling (Multilateral-Whaling Regulation), was ratified on September 24, 1931.¹⁴ Although the Multilateral-Whaling Regulation is predominantly regulatory, articles four and five are prohibitory. The primary objective of this Convention was to insure the propagation of whales for the survival of the whaling industry. Thus the Multilateral-Whaling Regulation prohibits the taking of calves, suckling whales, immature whales, and females accompanied by calves.¹⁵ The Multilateral-Whaling Regulation mandates that waste of whale products be kept to a minimum by using all possible parts of the carcasses.¹⁶ The regulations only apply to baleen whales,¹⁷ but the Convention also completely bans the taking of right whales, including certain subspecies.¹⁸

Right whales have been hunted since 800 to 1000 A.D.¹⁹ They were named "right" whales because they swam close to shore, swam relatively slowly, and floated when dead; thus, they were the "right" whales to kill.²⁰ Right whales float when dead because of the extremely high oil content in their tissues.²¹ The ease with which they could be killed and the high economic return from the whale oil exacerbated the decline of the species, and today, only an estimated four thousand right whales survive.²²

The Multilateral-Whaling Regulation contains inherent problems which render it ineffective. For example, there is little, if any, sexual dimorphism between male and female baleen whales,²³ consequently, it is practically impossible for a whaling crew to distinguish a pregnant female from a male, thus, pregnant females might be killed in violation of article five.

14. Multilateral-Whaling Regulation, *supra* note 11.

15. *Id.* art. 5.

16. *Id.* art. 6.

17. *Id.* art. 2.

18. *Id.* art. 4.

19. THE ENCYCLOPEDIA OF MAMMALS 172 (D. MacDonald ed. 1984).

20. *Id.* at 230.

21. See *State Sets Rules to Protect Endangered Right Whales*, Boston Globe, Mar. 24, 1989, at 6, col. 1.

22. THE ENCYCLOPEDIA OF MAMMALS, *supra* note 19, at 230.

23. *Id.* at 218.

Furthermore, some calves suckle from underneath their mothers rather than at their sides.²⁴ Humans aboard a whaling boat are not able to see a suckling calf from the surface of the ocean, and thus these females might also be wrongfully killed. Finally, minke whales, a relatively abundant species that is favored by some whalers, are almost indistinguishable from the pygmy right whales.²⁵ The Multilateral-Whaling Regulation prohibits the taking of pygmy right whales,²⁶ yet the possibility remains that they will be killed due to their similarity to minke whales.

The Multilateral-Whaling Regulation also includes an opt-out provision contained in virtually all international whaling treaties and conventions.²⁷ Article twenty provides that any contracting party may "declare that . . . the present Convention shall not apply to any territories named in such declaration."²⁸ Thus, a contracting party can relieve itself of the regulations and prohibitions contained in the Convention. Furthermore, because the Multilateral-Whaling Regulation does not discuss trade with non-parties, a contracting party can hire a non-party to take whales in violation of the Convention.²⁹

B. *Multilateral-Whaling Convention*

The International Convention for the Regulation of Whaling (Multilateral-Whaling Convention) was ratified on December 2, 1946.³⁰ The Multilateral-Whaling Convention supplemented the 1931 Multilateral-Whaling Regulation by providing further protection to the whales of the world.³¹ The

24. THE ENCYCLOPEDIA OF MAMMALS, SUPRA note 19, at 236.

25. *Id.* at 234.

26. Multilateral-Whaling Regulation, *supra* note 11, art. 4.

27. See *infra* text accompanying notes 39-40, 85 & 231.

28. Multilateral-Whaling Regulation, *supra* note 11, art. 20.

29. Kindt and Wintheiser, *The Conservation and Protection of Marine Mammals*, 7 U. HAW. L. REV. 301, 336 (1985); See also Kindt, *A Summary of Issues Involving Marine Mammals and Highly Migratory Species*, 18 AKRON L. REV. 1, 8 (1984).

30. International Convention for the Regulation of Whaling, Dec. 2, 1946, 62 Stat. 1716, T.I.A.S. No. 1849, 161 U.N.T.S. 72 [hereinafter Multilateral-Whaling Convention].

31. S. LYSTER, INTERNATIONAL WILDLIFE LAW 18 (1985).

Multilateral-Whaling Convention, like its predecessor, is primarily regulatory. The preamble to this Convention expressly states that its purpose is to "make possible the orderly development of the whaling industry."³² The Multilateral-Whaling Convention calls for the taking of whales "best able to sustain exploitation" in order to give depleted species a chance to recover.³³ Presumably, once recovered, a depleted species could again be subjected to the destructive forces of the whaling industry.

Perhaps the most important aspect of the Multilateral-Whaling Convention is article III(1), which establishes the International Whaling Commission (IWC). The IWC was formed in order to organize studies, collect data on whale populations, and to act as a general information center for the contracting parties.³⁴ Although the IWC was intended to be an impartial body, it has been criticized for serving the whaling industry rather than protecting depleted whale stocks.³⁵ The IWC is authorized to amend the provisions of the schedule³⁶ by adopting different regulations, and has taken advantage of this provision by amending the schedule frequently.³⁷ The latest amendment has placed a ban on all commercial whaling subject to certain exceptions.³⁸

Despite the commercial ban, whaling continues because of loopholes in the Multilateral-Whaling Convention. The first major loophole is found in article V(3), which provides contracting parties with an opportunity to object to any amendment. This objection procedure is analogous to the opt-out

32. Multilateral-Whaling Convention, *supra* note 30, preamble.

33. *Id.*

34. *Id.* art. IV.

35. Levin, *Toward Effective Cetacean Protection*, 12 NAT. RESOURCES L. 549, 579 (1979).

36. Multilateral-Whaling Convention, *supra* note 30, art. V. Schedules are the portion of the Whaling Regulation that sets forth which species may be taken, and which cannot.

37. OFFICE OF THE LEGAL ADVISER, U.S. DEP'T OF STATE, Pub. No. 9433, TREATIES IN FORCE 385 (1989).

38. International Convention for the Regulation of Whaling, 1946: Amendments to the Schedule, Aug. 27, 1980, para. 10(c), 32 U.S.T. 4242, T.I.A.S. No. 9946, ____ U.N.T.S. ____.

procedure found in the Multilateral-Whaling Regulation.³⁹ Any government that presents an objection to the IWC within ninety days of the new amendment will not be held to the provisions of that amendment.⁴⁰ The three major whaling states, the USSR, Japan, and Norway, consistently object to the IWC's amendments.⁴¹ The USSR and Japan are responsible for eighty percent of all the whaling that occurs.⁴² Thus, if these countries object to a restriction or an outright ban on whaling, the purpose of the restriction is defeated.

The second loophole contained in the Multilateral-Whaling Convention is found in article I(2) which provides that the Convention only applies to contracting parties.⁴³ This exemption leads to pirate whaling and increased trade with non-parties, thus defeating the purpose of the Convention.⁴⁴ A contracting party can avoid the prohibitions of the Multilateral-Whaling Convention by operating under a non-party flag or hiring non-parties to whale for them. This allows the contracting parties to avoid compliance with the regulations, while at the same time appearing to comply, thus avoiding political pressure from the parties that actually do observe the terms of the Convention.⁴⁵

The third major loophole in the Multilateral-Whaling Convention is the scientific-taking exception found in article VIII(1). This article allows a contracting party's own government, contrary to the Convention, to grant special permits authorizing the taking of whales in the name of science.⁴⁶ Although a scientific committee reviews the permits before they are issued and makes recommendations regarding their sub-

39. Multilateral-Whaling Regulation, *supra* note 11, art. 20.

40. Multilateral-Whaling Convention, *supra* note 30, art. V(3)(a)-(c).

41. Lyster, *supra* note 31, at 27. For example, when a schedule bans the taking of a certain species, some countries will file an objection and continue to kill these whales despite the ban.

42. Levin, *supra* note 35, at 550.

43. Multilateral-Whaling Convention, *supra* note 30, art. I(2).

44. Lyster, *supra* note 31, at 29.

45. *Id.* Likewise American tuna fisherman have used a similar device to avoid complying with the Marine Mammal Protection Act's limits on killing dolphins. Brower, *The Destruction of Dolphins*, ATLANTIC MONTHLY, July 1989, at 35, 58.

46. Multilateral-Whaling Convention, *supra* note 30, art. VIII.

stance, these recommendations are not always followed.⁴⁷ For example, in 1982, Denmark applied for a permit to take nine fin whales. The scientific committee rejected the application, but Denmark awarded itself a permit to take three whales despite the protests of the committee.⁴⁸

Another problem with the Multilateral-Whaling Convention is the lack of enforcement mechanisms, a recurring theme in international wildlife treaties. In 1971, the International Observer Scheme (IOS) was initiated in order to provide a method of enforcement.⁴⁹ The IOS allows observers to be placed on foreign whaling vessels to monitor the actual catches and the accuracy of the kills reported. This scheme was developed to prevent illegal catches from being reported as legal ones, and to ensure that honest mistakes were not made, or if made, were reported. Because a party's national inspectors may be biased and allow certain irregularities to occur, the IOS observers are appointed by, and are responsible to, the IWC.⁵⁰ However, it is the party being observed that pays the observer.⁵¹

The United States-Japan International Observer Scheme provides an example of how the IOS program works.⁵² The parties, expressing concern for the conservation of whale stocks and for continued productivity of the whaling industry, developed a surveillance scheme.⁵³ Observers are given the status of senior officials,⁵⁴ and are allowed to freely observe the activities that take place at the land stations (the ports at which the whaling vessels dock to unload and process the dead whales).⁵⁵ Specifically, the observers are instructed to

47. Lyster, *supra* note 31, at 30.

48. *Id.*

49. Amendments to the Schedule to the International Whaling Convention of 1946, July 6, 1971, 23 U.S.T. 179, T.I.A.S. No. 7293, ____ U.N.T.S. ____.

50. Whaling: International Observer Scheme, May 2, 1975, United States-Japan, art. 2, 26 U.S.T. 1009, T.I.A.S. No. 8088 [hereinafter IOS].

51. *Id.* art. 5.

52. *Id.*

53. *Id.*

54. *Id.* art. 3(1).

55. *Id.* art. 3(3).

note the species, number, size, and sex of all whales taken.⁵⁶ The most important part of the IOS is contained in article 3(6). Under this provision, observers are required to report any infractions to the manager of the land station, the senior national inspector, and the IWC.⁵⁷ Although neither the IOS nor the Multilateral-Whaling Convention provide penalties for violations, it is logical to assume that noncomplying parties will be dealt with politically.

Despite the two whaling conventions presently in effect, and the IOS enacted to enforce these conventions, many whale species are threatened with extinction.⁵⁸ Although the world population of whales is on the rise because of decreased whaling, isolation of particular whale stocks may result in the extinction of certain species.⁵⁹ Furthermore, much of the whaling that takes place is unnecessary. Sperm whales, listed as an endangered species pursuant to the Endangered Species Act,⁶⁰ are hunted extensively despite the fact that their meat is inedible.⁶¹ They are killed for spermaceti, a unique oil found only in sperm whales, which is valued for use as a lubricant in missiles.⁶² Jojoba oil has the same properties as spermaceti and would work equally as well.⁶³ However, sperm whales are continually hunted for their oil, and it is unlikely that the military will turn to jojoba oil until the whales are no longer available.

C. *The Pelly and Packwood-Magnuson Amendments*

The United States has attempted to facilitate enforcement of the two whaling conventions with unilateral action. The Pelly Amendment to the Fisherman's Protective Act of 1967 (Pelly Amendment) was the first of these enforcement

56. *Id.*

57. *Id.* art. 3(6).

58. In 1988, there were eight whale species listed as endangered pursuant to the Endangered Species Act, 16 U.S.C. §§ 1531-1543 (1988). See 50 C.F.R. § 17.11 (1988).

59. See Kindt and Wintheiser, *supra* note 29, at 321.

60. 50 C.F.R. § 17.11 (1988).

61. Levin, *supra* note 35, at 587.

62. *Id.*

63. *Id.*

attempts.⁶⁴ The Pelly Amendment authorizes the United States government to initiate economic sanctions against countries whose activities "diminished the effectiveness" of the IWC's conservation measures.⁶⁵ Unfortunately, the term "diminish the effectiveness" was not defined in the amendment, and the courts interpreting the provision have held that imposition of economic sanctions is a discretionary act.⁶⁶

The Packwood-Magnuson Amendment to the Fishery Conservation and Management Act (Packwood-Magnuson Amendment)⁶⁷ allegedly removed the discretionary element contained in the Pelly Amendment.⁶⁸ The Packwood-Magnuson Amendment mandates the imposition of economic sanctions against countries whose activities diminished the effectiveness of the IWC's conservation measures. Unfortunately, the Packwood-Magnuson Amendment was emasculated by the Supreme Court's decision in *Japan Whaling Association v. American Cetacean Society*.⁶⁹ In that case, the Court upheld the President's decision not to impose economic sanctions against Japan, despite Japan's refusal to comply with the IWC's ban on commercial whaling.⁷⁰ Thus, both congressional attempts to supplement IWC authority to enforce the whaling regulations have largely failed.

While the Supreme Court's decision in *Japan Whaling* constituted a major setback for whale conservationists,⁷¹ the Packwood-Magnuson Amendment has been effective in other cases. For example, Norway agreed to stop whaling in 1987 if the United States promised not to impose economic sanctions, thus ensuring the continued importation of approximately one hundred and forty-three million dollars worth of seafood into the United States each year.⁷² Furthermore, in 1985, Iceland

64. 22 U.S.C. § 1978 (1982).

65. 22 U.S.C. § 1978(a)(1) (1982).

66. 22 U.S.C. § 1978(b) (1982).

67. Fishery Conservation and Management Act, 16 U.S.C. § 1821 (1988).

68. Note, *Woe for the Whales*, CINCINNATI L. REV. 1285, 1292 (1987).

69. 478 U.S. 221 (1986).

70. *Id.* at 241.

71. Note, *supra* note 68, at 1301.

72. Synopsis, *Recent Developments in the Law of the Sea* 1986, 24 SAN DIEGO L. REV. 701, 710 (1987).

cancelled its plans to kill one hundred and twenty whales for "scientific" purposes as a result of pressure from the United States.⁷³ But the sword is double edged: the IWC is too vulnerable to politics. In 1978, Japan threatened to cancel a ten million dollar sugar deal with Panama in retaliation for the Panamanians placing an anti-whaling proposal on IWC's agenda.⁷⁴ Until the IWC can be insulated from political pressure, exporting nations (and the whales themselves) will be at the mercy of the economically stronger importing nations.

D. *Conservation of Antarctic Marine Living Resources Convention*

In 1959, the Antarctic Treaty was ratified by Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the USSR, Great Britain, and the United States.⁷⁵ The primary purposes of the Antarctic Treaty were to demilitarize the Antarctic, to prohibit the dumping of radioactive waste and detonation of nuclear bombs on the continent, and to preclude assertions of claims to territorial sovereignty.⁷⁶ The Antarctic Treaty contains no specific environmental provisions, but it does give each party the authority to make recommendations as to the preservation and conservation of living resources.⁷⁷ The parties to the Antarctic Treaty subsequently drafted the Convention on the Conservation of Antarctic Marine Living Resources pursuant to this authority.⁷⁸

The Antarctic Marine Convention was ratified on May 20, 1980.⁷⁹ The Antarctic Marine Convention, similar to the whaling conventions, was enacted to regulate the takings of

73. *Id.*

74. Kindt and Wintheiser, *supra* note 29, at 331.

75. The Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, T.I.A.S. No. 4780, 402 U.N.T.S. 71.

76. *Id.* arts. I, IV and V.

77. *Id.* art. IX(1)(f).

78. Convention on the Conservation of Antarctic Marine Living Resources, May 20, 1980, 33 U.S.T. 3476, T.I.A.S. No. 10240 [hereinafter Antarctic Marine Convention].

79. *Id.*

Antarctic marine life in order to ensure continued harvesting.⁸⁰ The conservation measures encompass all living organisms,⁸¹ and the definition of conservation includes "rational use."⁸² The Antarctic Marine Convention differs from the whaling conventions however, because it takes an ecosystemic approach. In other words, the Convention attempts to protect economically-valuable species by protecting the entire community of interrelated organisms. Article II(3) mandates that harvesting be performed in a way that "maint[ains] . . . the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources."⁸³ Despite this environmentally sound reasoning, the Convention's main objective is to regulate the taking of krill, the primary food source of baleen whales.⁸⁴ Thus, the Antarctic Marine Convention is yet another way to ensure the survival of the whaling industry.

The Antarctic Marine Convention also allows a contracting party to opt-out of any conservation measure if that party is "unable to accept the conservation measure."⁸⁵ Again, this type of loophole ensures that any kind of harvesting can occur, despite the protective measures contained in the Convention.

The Antarctic Marine Convention provides for two methods of international enforcement. First, article VII mandates that the contracting parties form a commission, whose function is to carry out the Convention's conservation measures.⁸⁶ The Antarctic Marine Convention further requires the commission to draw attention to any party or nonparty whose activities affect the implementation of the Convention.⁸⁷ In this way, contracting parties in compliance with the Convention can place political pressure on noncomplying states to con-

80. *Id.*

81. *Id.* art. I(2).

82. *Id.* art. II(3).

83. *Id.* art. II(3)(b).

84. Lyster, *supra* note 31, at 158.

85. Antarctic Marine Convention, *supra* note 78, art. IX (6)(c).

86. *Id.* arts. VII, IX.

87. *Id.* art. X.

form with the Convention's provisions. Second, the Antarctic Marine Convention mandates a system of observation and inspection whereby members of the Commission may board vessels to search out infractions.⁸⁸ These two schemes enable parties to monitor the harvesting activities of other countries, thus inhibiting violations of the conservation measures.

Most international wildlife treaties and conventions are enacted after some valuable resource is depleted, extinction threatens not only the animal itself, but the industry based on its exploitation. However, one unusual aspect of the Antarctic Marine Convention is that it was enacted prior to any heavy commercial use of the Antarctic.⁸⁹ This fact lends more support to the theory that this Convention was enacted to protect the whaling industry. Many species of baleen whales were threatened with extinction in 1980,⁹⁰ and, by protecting the krill, contracting parties could increase the likelihood that whaling could continue.⁹¹

E. *Conservation of Antarctic Seals Convention*

The Antarctic Seals Convention⁹² is couched in terms of "harvesting" seals and promoting the "optimum sustainable yield" of animals.⁹³ It also prohibits the taking of certain seal species that are threatened with extinction.⁹⁴ Thus the Antarctic Seal Convention has both regulatory and prohibitory elements. Unfortunately, even the prohibition on taking certain species is subject to exceptions.⁹⁵ A party may kill any seal species in limited quantities in order to feed men or dogs, to provide specimens for museums or other educational institutions, or for scientific research purposes.⁹⁶

88. *Id.* art. XXIV.

89. Lyster, *supra* note 31, at 157.

90. Comment, *Cetacean Rights Under Human Laws*, 21 SAN DIEGO L. REV. 911, 912 (1984).

91. See *supra* text accompanying notes 79-84.

92. Antarctic Seal Convention, *supra* note 13.

93. *Id.* preamble.

94. *Id.* art. 2(1).

95. *Id.* art. 4(1).

96. *Id.* art. 4(1)(a)-(c).

The Antarctic Seal Convention, like the Antarctic Marine Convention,⁹⁷ claims to take an ecosystemic conservation approach. In its preamble, the drafters state that the Antarctic Seal Convention is enacted in order to "promote and achieve the objectives of protection, scientific study and rational use of Antarctic seals, and to maintain a satisfactory balance within the ecological system."⁹⁸ However, the remainder of the Antarctic Seal Convention is concerned solely with the use of seals for human consumption. The ecosystemic conservation approach is mentioned at only one other point in the Antarctic Seal Convention: the Scientific Committee on Antarctic Research (SCAR) is "invited" to inform other parties of the fact that harvesting is having a "significantly harmful effect . . . on the ecological system in any particular locality."⁹⁹ Nevertheless, once this fact is disclosed, neither SCAR nor the parties are under any obligation to remedy the damage to the ecosystem.¹⁰⁰

F. Interim Convention on the Conservation of North Pacific Fur Seals

On February 9, 1957, Canada, Japan, the USSR, and the United States ratified the Convention on the Conservation of North Pacific Fur Seals.¹⁰¹ Although the Fur Seal Convention was intended to be temporary, it has been extended and is still in force today.¹⁰² The primary purpose of the Fur Seal Convention is to sustain the maximum "productivity of fur seal resources" and to "produce the greatest harvest" of

97. Antarctic Marine Convention, *supra* note 78.

98. *Id.* preamble.

99. *Id.* art. 5(4)(b).

100. Antarctic Seal Convention, *supra* note 13. The duties under article 5(4)(b) end here. The discretionary language indicates that SCAR and the parties are under no further obligations.

101. Interim Convention on the Conservation of North Pacific Fur Seals, Feb. 9, 1957, 8 U.S.T. 2283, T.I.A.S. No. 3948, 314 U.N.T.S. 105 [hereinafter *Fur Seal Convention*].

102. Protocol amending the Fur Seal Convention, Oct. 14, 1980, T.I.A.S. No. 10020. This Protocol is implemented by the Fur Seal Act 16 U.S.C. §§ 1151-1187 (1988). See also M. BEAN, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* (1983).

seals.¹⁰³ Article III of the Fur Seal Convention prohibits pelagic sealing.¹⁰⁴ However, the Fur Seal Convention allows exceptions to the ban on pelagic sealing, and regulates the taking of seals found on land.¹⁰⁵ The Fur Seal Convention does not address either the preservation of the ecosystem or the habitat in which the seals live.

G. *Convention on the Conservation of Polar Bears*

The Agreement on the Conservation of Polar Bears (Polar Bear Convention) was ratified in 1973.¹⁰⁶ The preamble to the Convention discusses polar bears as a "resource" that must be "managed."¹⁰⁷ Polar bears are valued for their thick, white pelt and for their meat. Polar bears are the largest carnivorous quadrupeds in the world, and are distributed around the pole in the northern hemisphere.¹⁰⁸ Adult polar bears travel approximately forty-three miles per day in search of food, and one tagged bear was found to have traveled six hundred and ninety-four miles in one year.¹⁰⁹ Thus, the bears can travel across the boundaries of Alaska, Canada, Greenland, and the USSR.

Females deliver one to three cubs every three years,¹¹⁰ so the population replacement rate is relatively slow. This slow reproductive rate, coupled with the number of bears killed each year, threatens these animals with significant population decline. For example, in 1984, Canadians took approximately six hundred bears. Alaskan Eskimos take approximately one hundred per year, and Greenland takes between one hundred and twenty-five and one hundred and fifty per year.¹¹¹

103. Fur Seal Convention, *supra* note 101.

104. *Id.* art. I. Pelagic sealing is defined as the killing, taking, or pursuing of seals in the sea.

105. *Id.* art. IX.

106. Agreement on the Conservation of Polar Bears, Nov. 15, 1973, 27 U.S.T. 3918, T.I.A.S. No. 8409 [hereinafter Polar Bear Convention].

107. *Id.* preamble.

108. THE ENCYCLOPEDIA OF MAMMALS, *supra* note 19, at 92.

109. *Id.* at 92-93.

110. *Id.* at 92.

111. *Id.* at 93.

The Polar Bear Convention prohibits the taking of polar bears with the following exceptions: for bona fide scientific purposes, for conservation purposes, to prevent disturbance of the management of other living resources, takings by local peoples using traditional hunting methods, or takings by a party's nationals if done by traditional means.¹¹² If a polar bear is killed for conservation purposes, or under the prevention of disturbance to other living resources exception, the individual who killed the bear must forfeit the skin and all other valuable items to his party.¹¹³ Furthermore, the party is prohibited from putting these forfeited items to commercial use.¹¹⁴ This ensures that parties will not kill polar bears in the name of conservation or protection, and then profit from the violation of the treaty.

The Polar Bear Convention is similar to the Antarctic Seal Convention because it mandates that the parties "shall . . . protect the ecosystems of which polar bears are a part" ¹¹⁵ In particular, parties must protect areas used by the bears for denning, feeding, and migration.¹¹⁶ Because these bears can be highly migratory, this protection can extend to large areas of land. The mandatory duty to protect denning sites is particularly important because there are relatively few places where a female polar bear can den her cubs.¹¹⁷ This mandate, if strictly enforced by the contracting parties, can have serious ramifications for oil, gas, and mineral exploitation.¹¹⁸ It remains to be seen how effective the Polar Bear Convention will be, especially in light of the recent interest in oil and gas exploration in the Arctic region.¹¹⁹ It is unlikely that this Convention will be a major consideration when the final decision is made.

112. Polar Bear Convention, *supra* note 106, arts. I, III (1)(a)-(e).

113. *Id.* art. III (1)(c).

114. *Id.* art. III (2).

115. *Id.* art. II.

116. *Id.*

117. Lyster, *supra* note 31, at 60.

118. *Id.*

119. Lee, *Oil in the Wilderness: An Arctic Dilemma*, 174 NAT'L GEOGRAPHIC 858 (1988).

Presently, the greatest threat to polar bears is not hunting, but the pollution that has found its way to the Arctic region.¹²⁰ Polychlorinated biphenyls (PCBs), dichlorodiphenyl-trichloroethane (DDT), and heavy metals have all been found in the tissues of polar bears,¹²¹ and it is inevitable that these toxins will eventually contribute to the decline of the species. The Convention's mandate to protect the polar bear's ecosystem¹²² should include preventing pollutants such as PCBs, DDT, and heavy metals from invading the Arctic region. Their presence suggests that the Convention's actual protection is not as broad as its ecosystemic conservation approach suggests.

The implementing United States legislation for preserving marine mammals, the Marine Mammal Protection Act, subchapter two (MMPA),¹²³ has limited international application. The MMPA includes a moratorium on the taking and importation of marine mammals and marine mammal products.¹²⁴ However, the MMPA also provides for exceptions to this moratorium: marine mammals may be taken in the name of scientific research, for public display, or to enhance the recovery of the species.¹²⁵ Finally, the MMPA gives the Secretary of the Treasury the authority to ban imports of fish taken in operations which resulted in incidental kills of marine mammals.¹²⁶ The MMPA's eventual goal is to eliminate all incidental killings that occur during fishing operations.¹²⁷ The MMPA does not address the preservation of marine mammal habitat, and does not specifically mention marine mammal treaties and conventions, other than the Fur Seal Convention.¹²⁸

120. Kindt & Wintheiser, *supra* note 29, at 349.

121. *Id.*

122. Polar Bear Convention, *supra* note 106, art. II.

123. Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1371-1407 (1988).

124. 16 U.S.C. § 1371(a) (1988).

125. 16 U.S.C. § 1371(a)(1) (1988).

126. 16 U.S.C. § 1371(a)(2) (1988).

127. *Id.*

128. 16 U.S.C. § 1378(b) (1988).

H. *Migratory Bird Treaty: United States-Great Britain*

The Convention for the Protection of Migratory Birds (US-GB) was the first in a series of four migratory bird treaties signed by the United States.¹²⁹ The US-GB has an extremely utilitarian purpose: the preamble expresses a desire to protect birds that are valued as food, or that destroy insects that forage on human agricultural crops.¹³⁰ The protection extends only to migratory birds and covered groups of birds, rather than individual species.¹³¹ The US-GB mandates closed seasons on hunting,¹³² and also prohibits the taking of nests or eggs.¹³³ This early treaty, however, is also replete with exceptions to the prohibitions. For example, either party can unilaterally decide to take the nests or eggs of the protected birds for "scientific or propagating purposes."¹³⁴ Furthermore, either party can issue permits to take any bird which becomes "injurious to the agricultural or other interests in any particular community."¹³⁵ The US-GB does not provide for methods of international inspection, reporting, or enforcement, and Great Britain and the United States are free to kill any bird that is deemed "injurious" for any reason.¹³⁶

I. *Migratory Bird Treaty: United States-Mexico*

The Convention for the Protection of Migratory Birds and Game Mammals (US-M) was ratified on February 7, 1936.¹³⁷ This second migratory bird treaty was enacted for a similar purpose: to ensure the rational utilization of birds for sport, food, commerce, and industry.¹³⁸ The US-M like the

129. Convention for the Protection of Migratory Birds, Aug. 16, 1916, United States-Great Britain, 39 Stat. 1702, T.S. No. 628 [hereinafter US-GB].

130. *Id.* preamble.

131. *Id.* art. I.

132. *Id.* art. II(1)-(3).

133. *Id.* art. V.

134. *Id.*

135. *Id.* art. VII.

136. US-GB, *supra* note 129, art. VII.

137. Convention for the Protection of Migratory Birds and Game Mammals, Feb. 7, 1936, United States-Mexico, 50 Stat. 1311, T.S. No. 912 [hereinafter US-M].

138. *Id.* preamble.

US-GB establishes closed hunting seasons.¹³⁹ However, the US-M goes one step further and mandates refuge zones in which the taking of the protected birds will be prohibited.¹⁴⁰ Bird hunting from aircraft is also prohibited.¹⁴¹

The migratory birds protected by the US-M are listed by family.¹⁴² Therefore, all species within a listed family are protected. Although the transportation of these birds across the United States-Mexican border is prohibited,¹⁴³ each party may kill protected birds within its own country if the birds become "injurious to agriculture and constitute plagues, as well as when they come from reserves or game farms."¹⁴⁴

J. *Migratory Bird Treaty: United States-Japan*

Thirty-six years passed before the United States signed another migratory bird treaty.¹⁴⁵ The Convention for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment (US-J) is the first migratory bird treaty that suggests birds have value other than their economic value.¹⁴⁶ The preamble of the US-J states that birds are "a natural resource of great value for recreational, aesthetic, scientific, and economic purposes"¹⁴⁷ The US-J also recognizes that some species are in danger of extinction,¹⁴⁸ and that the two countries want to take steps to prevent this extinction.

The US-J protects migratory birds if positive evidence of migration between the two countries exists,¹⁴⁹ or if there are

139. *Id.* art. II(A),(C)-(D).

140. *Id.* art. II(B).

141. *Id.* art. II(F).

142. *Id.* art. IV.

143. *Id.* art. III.

144. *Id.* art. II(E).

145. Convention for the Protection of Migratory Birds and Birds in Danger of Extinction, and Their Environment, Mar. 4, 1972, United States-Japan, 25 U.S.T. 3329, T.I.A.S. No. 7990 [hereinafter US-J].

146. See *supra* text accompanying notes 129-144.

147. US-J, *supra* note 145, preamble.

148. *Id.*

149. *Id.* art. II(1)(a).

species or subspecies of birds common to both countries.¹⁵⁰ The US-J lists the protected birds by species rather than family.¹⁵¹ Thus, not all the species within a particular family are protected. The taking of the listed birds or their eggs is prohibited,¹⁵² but this prohibition is subject to a number of exceptions. For example, listed birds may be taken for "scientific, educational, propagative or other specific purposes not inconsistent with the objective of this Convention."¹⁵³ Furthermore, listed birds can be killed in order to protect persons or property, during open hunting seasons, on private game farms, and by Eskimos, Indians, or other indigenous peoples.¹⁵⁴

The US-J affords special protection to island environments,¹⁵⁵ and specifically mandates the preservation of the environment in which the birds live.¹⁵⁶ The US-J also mandates that the parties seek means to prevent "damage resulting from pollution of the seas."¹⁵⁷ Finally, the US-J suggests that the parties "endeavor to establish sanctuaries" for the birds.¹⁵⁸

K. *Migratory Bird Treaty: United States-USSR*

The most recent migratory bird treaty, the Convention Concerning the Conservation of Migratory Birds (US-USSR), was signed by the United States and the Soviet Union.¹⁵⁹ The US-USSR is designed to protect birds for their "scientific, economic, aesthetic, cultural, educational, recreational, and ecological value."¹⁶⁰ The protected birds are listed by family and

150. *Id.* art. II(1)(b).

151. *Id.* annex.

152. *Id.* art. III(1).

153. *Id.* art. III(1)(a).

154. *Id.* art. III(1)(b)-(e).

155. *Id.* art. VI(2).

156. *Id.* art. VI.

157. *Id.* art. VI(a).

158. *Id.* art. III(3).

159. Convention Concerning the Conservation of Migratory Birds, Nov. 19, 1976, United States-USSR, 29 U.S.T. 4647, T.I.A.S. No. 9073 [hereinafter US-USSR].

160. *Id.* preamble.

species,¹⁶¹ and are only listed if they are known to migrate or if populations of birds common to both countries share breeding, feeding, wintering, or molting areas.¹⁶²

Article II of the US-USSR lists the exceptions to the general prohibition of killing the listed birds. Birds may be killed for scientific, educational, propagative, or other specific purposes not inconsistent with the US-USSR, during open hunting seasons, by indigenous peoples in order to meet nutritional and other essential needs, or for the protection of persons or property.¹⁶³ The parties are also encouraged "[t]o the extent possible, . . . [to] undertake measures to protect and enhance the environment of migratory birds and to prevent and abate the pollution or environmental alteration of that environment."¹⁶⁴ If this provision were phrased in terms of mandatory duties imposed on the parties, rather than a precatory statement, it would be an extremely broad-reaching provision.

The US-USSR is the only one of the four migratory bird treaties to recognize the importance of ecological diversity. Article IV requires that the parties identify areas of special importance to the birds, including areas "which require special protection because of their ecological diversity."¹⁶⁵ The US-USSR also recognizes that a species can be in danger of extinction despite a large worldwide population. Article V provides that special protective measures will be developed if "a species, subspecies or *distinct segment of a population* of migratory bird is in danger of extinction."¹⁶⁶ Thus, a bird can be a member of a common species, and still be protected under the US-USSR if the local population is small. Finally, and perhaps most importantly, the US-USSR mandates that each party "shall to the maximum extent possible, undertake measures necessary to establish preserves, refuges, protected areas, and also facilities intended for the conservation of mi-

161. *Id.* art. I(3).

162. *Id.* art. I(1)(a)-(b).

163. *Id.* art. II(1)(a)-(d).

164. *Id.* art. IV(1).

165. *Id.* art. IV(2)(c).

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

gratory birds and their environment, and to manage such areas so as to preserve and restore the natural ecosystem."¹⁶⁷

The US-USSR is the strongest of the four migratory bird treaties. Historically, protection was initially afforded only to birds that were of economic value.¹⁶⁸ Gradually, the parties recognized that other birds had inherent aesthetic value, and protection was extended to encompass these species as well.¹⁶⁹ The most important step was taken when protection was extended to the habitats in which these birds live.¹⁷⁰ If the parties to this US-USSR actually strive to minimize environmental harm and pollution, and create sanctuaries and preserves for birds, then we will be one step closer to preserving ecological diversity.

The United States Migratory Bird Treaty Act (MBTA) implements the preceding four bird treaties.¹⁷¹ The MBTA authorizes the Secretary of Interior to issue such regulations as may be necessary to implement the provisions of the four conventions.¹⁷² However, the Secretary has thus far only issued regulations regarding the importation and exportation of migratory birds.¹⁷³

L. *Western Hemisphere Convention*

The Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (Western Hemisphere Convention) was ratified on October 12, 1940, and was a convention ahead of its time.¹⁷⁴ The Western Hemisphere Convention was signed by Bolivia, Cuba, El Salvador, Nicaragua, Peru, Dominican Republic, United States, Venezuela, Ecuador, Costa Rica, Mexico, Uruguay, Brazil, Colombia, and

167. *Id.* art. VII.

168. *See supra* text accompanying notes 129-144.

169. *See supra* text accompanying notes 145 and 159.

170. *Id.*

171. Migratory Bird Treaty Act, 16 U.S.C. § 712 (1988) [hereinafter MBTA].

172. *Id.*

173. 50 C.F.R. §§ 14.1-14.204 (1988).

174. Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere, Oct. 12, 1940, 56 Stat. 1355, T.S. 981, 161 U.N.T.S. 193 [hereinafter Western Hemisphere Convention].

Chile.¹⁷⁵ Its objectives are to protect all native plants and animals from extinction, to protect primitive regions, and to protect regions of aesthetic, historic, or scientific value.¹⁷⁶ Article II of the Western Hemisphere Convention requires the contracting parties to explore the possibility of establishing national parks, national reserves, or national monuments.¹⁷⁷ The Convention mandates that the resources of these reserves "shall not be subject to exploitation for commercial profit."¹⁷⁸

There is a direct prohibition on "hunting, killing and capturing" wildlife within these national parks.¹⁷⁹ The exceptions to the taking of animals, unlike all the other treaties and conventions examined thus far, are extremely narrow. Animals may be killed or captured only "by or under the direction or control of the park authorities, or for duly authorized scientific investigations."¹⁸⁰ Furthermore, the Western Hemisphere Convention mandates education programs for the public.¹⁸¹ An educated public is less likely to harass or kill the wildlife existing in the park systems.

Article V of the Western Hemisphere Convention, if strongly drafted, would have been a powerful tool for use by wildlife conservationists. Unfortunately, the article merely asks the contracting parties to "propose" laws to protect wildlife in their prospective countries, outside the parks' borders.¹⁸² Despite this weakly-drafted provision, the Convention protects wildlife by three methods. First, as previously mentioned, wildlife within the parks, reserves, and monuments cannot be killed or captured unless authorized by park personnel.¹⁸³ Second, article VII mandates that the contracting parties protect "migratory birds of economic or aesthetic value or prevent the threatened extinction of any given spe-

175. *Id.* signatory page.

176. *Id.* preamble.

177. *Id.* art. II(1).

178. *Id.* art. III.

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.* art. V(1).

183. *Id.* art. III.

cies.”¹⁸⁴ Third, article VIII provides that the parties shall create an annex of wildlife species whose protection “is declared to be of special urgency and importance.”¹⁸⁵ Annexed species “shall be protected as completely as possible, and their hunting, killing, capturing, or taking shall be allowed only with the permission of the appropriate government authorities.”¹⁸⁶ Permission to take one of these animals will be given only in order to “further scientific purposes, or when essential for the administration of the area.”¹⁸⁷

In theory, the Western Hemisphere Convention offers broad protection not only to many species of wildlife, but to their habitats as well. However, the Convention has been referred to as a “sleeping convention,” a convention of limited practical value.¹⁸⁸ Its annex has not been revised since 1967,¹⁸⁹ and the weakly-drafted provisions of article V render the protection of wildlife ineffectual. The strength of the Western Hemisphere Convention lies in its possibilities.¹⁹⁰ Future wildlife treaties and conventions should mandate, rather than suggest, such sweeping protections.

M. *Convention on International Trade in Endangered Species of Wild Fauna and Flora*

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was signed by the United States on March 3, 1973.¹⁹¹ Its goal is to neutralize the destructive impacts of international wildlife trade on the survival of endangered or threatened species,¹⁹² and it has been called the most successful of all international wildlife trea-

184. *Id.* art. VII.

185. *Id.* art. VIII.

186. *Id.*

187. *Id.*

188. LYSTER, *supra* note 31, at 98.

189. *Id.* at 106.

190. *Id.* at 97-111.

191. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087, T.I.A.S. No. 8249, 993 U.N.T.S. 243 [hereinafter CITES].

192. Comment, *supra* note 8, at 10228.

ties.¹⁹³ The preamble to CITES recognizes that wildlife is "an irreplaceable part of the natural systems of the earth which must be protected," and is valuable "from aesthetic, scientific, cultural, recreational and economic points of view."¹⁹⁴ The Convention is designed to afford three levels of protection to wildlife, depending upon biological status. Species are listed in one of three appendices: appendix I species consist of all species "threatened with extinction which are or may be affected by trade";¹⁹⁵ appendix II species are those that are not presently threatened with extinction, but may become so because of the high volume of trade, or because they appear similar to appendix I species;¹⁹⁶ and appendix III species are those species "which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation."¹⁹⁷

Appendix I specimens cannot be traded without both an import permit and an export permit.¹⁹⁸ An export permit will only be granted if a scientific authority of the state of export determines that the exportation will not be detrimental to the survival of the species, and it has been determined that the particular specimen was not obtained illegally.¹⁹⁹ Furthermore, if an animal is to be shipped live, the state of export must determine that the animal will be shipped so "as to minimize the risk of injury, damage to health or cruel treatment," and the exporting state must be satisfied that an import permit has been granted.²⁰⁰ An import permit will be granted only if the scientific authority of the state of import has determined that "the import will be for purposes which are not detrimental to the survival of the species involved,"²⁰¹ and the state of import is satisfied that the recipient of a living speci-

193. Lyster, *supra* note 31, at 240.

194. CITES, *supra* note 191, preamble.

195. *Id.* art. II(1).

196. *Id.* art. II(2).

197. *Id.* art. II(3).

198. *Id.* art. III(2)-(3).

199. *Id.* art. III(2)(a)-(b).

200. *Id.* art. III(2)(c)-(d).

201. *Id.* art. III(3)(a).

men is equipped to care for the animal properly.²⁰² Furthermore, the state of import must determine that the specimen will not be used primarily for commercial purposes.²⁰³

Trade in appendix II specimens requires only an export permit,²⁰⁴ which should be issued only when the scientific authority of the state of export determines that the export will not be detrimental to the survival of the species,²⁰⁵ and that the specimen was not obtained illegally.²⁰⁶ Finally, if a live animal is to be exported, the exporting state must determine that the animal will be shipped so as to "minimize the risk of injury, damage to health or cruel treatment."²⁰⁷

The exportation of appendix III specimens is allowed only if the exporting state determines that the specimen was not obtained illegally, and if a live specimen, that it will be shipped to minimize the risk of injury to the animal.²⁰⁸ The importing state must examine only the export permit and a certificate of origin.²⁰⁹

Article I of CITES defines species as "any species, subspecies, or geographically separate population thereof."²¹⁰ A party therefore can list a population of animals in appendix III of CITES, regardless of the species' abundance elsewhere in the world. This enables a country to protect its own wildlife from potential extinction in that country. One of CITES' major weaknesses is also found in article I. "Specimen" is defined as "any animal . . . [or] any readily recognizable part or derivative thereof."²¹¹ The term "readily recognizable" is not defined elsewhere in CITES, and thus creates a loophole. As one commentator has noted, leaving the term "readily recognizable" to be defined by individual parties allows countries to circumvent compliance with CITES because of "technical" in-

202. *Id.* art. III(3)(b).

203. *Id.* art. III(3)(c).

204. *Id.* art. IV(2).

205. *Id.* art. IV(2)(a).

206. *Id.* art. IV(2)(b).

207. *Id.* art. IV(2)(c).

208. *Id.* art. V(a)-(b).

209. *Id.* art. V(3).

210. *Id.* art. I(a).

211. *Id.* art. I(b)(ii).

ability to recognize a protected species "part" or "derivative."²¹² For example, China, a party to CITES since 1981, is technically able to export manufactured drugs containing rhinoceros horn (trade in the endangered rhinoceros is prohibited under CITES) because China claims it is unable to readily recognize the derivative-powdered-rhinoceros horn in the manufactured end-product.²¹³

An identification manual, possibly supplemented with confiscated samples of readily recognizable parts, is currently being prepared.²¹⁴ This manual, if distributed to customs officials worldwide, should assist in the identification of illegally imported specimens.

CITES' other provisions are also susceptible to abuse. For example, article VII creates an exemption for the import or export of specimens that are "personal or household effects."²¹⁵ A high percentage of wildlife products is sold to tourists,²¹⁶ and it is far too simple for a tourist to claim that the item in question was purchased in his home state, or that it was purchased before CITES came into effect. The failure to define "personal or household effects" may lead to the abuse of this exception. As long as tourists continue to purchase items from illegally-killed animals, the poaching of protected species will continue. Moreover as long as tourists are successful in bringing these items home, they will continue to buy.

Article X of CITES permits trade in listed species by countries that are not parties to the Convention, provided those countries issue comparable documents which substantially conform to those required of parties to CITES.²¹⁷ Approximately thirty percent of wildlife trade occurs with non-parties,²¹⁸ and CITES encourages and rewards non-parties for

212. Schonfeld, *supra* note 4, at 142.

213. *Demand for Rhino Horn Falls*, IUCN BULL., Apr.-June 1983, at 36.

214. Schonfeld, *supra* note 4, at 142.

215. CITES, *supra* note 191, art. VII.

216. Schonfeld, *supra* note 4, at 136.

217. CITES, *supra*, note 191, art. X. See also McFadden, *Asian Compliance with CITES: Problems and Prospects*, 5 B.U. INT'L L.J., 311, 317 (1987).

218. Schonfeld, *supra* note 4, at 131.

this behavior by giving them a monopoly in the market.²¹⁹ For example, Singapore, a country with virtually no indigenous wildlife, was notorious as a "laundering" port for illegal wildlife trade until 1986, the year it ratified CITES.²²⁰ If trade with non-parties were forbidden, non-parties would be able to trade only among themselves, and the demand for these wildlife products would decrease.

The absence of a treaty-wide enforcement structure for CITES,²²¹ coupled with poor national enforcement constitutes another major flaw in CITES. TRAFFIC, a group funded by the World Wildlife Fund, transported a cactus through ten countries to test the effectiveness of CITES. Almost all species of cactus are listed in one of the appendices of CITES, and the TRAFFIC members displayed the cactus openly or declared it. Not one official from any of the ten countries questioned the "tourist" as to the origin of the cactus. Furthermore, only the United States and the USSR confiscated the cactus, but both countries confiscated it for health reasons.²²² Another example of poor national enforcement occurred with an actual shipment of penguins, which are listed in appendix I and appendix II.²²³ An importing country was presented with a shipment of wild penguins and an export permit from Paraguay.²²⁴ Paraguay is a landlocked country with a tropical climate.²²⁵ Despite the fact that it is widely known that penguins are indigenous to Arctic regions the importing country allowed the shipment entry without question.²²⁶ Examples of flagrant violations such as these indicate that CITES cannot possibly be effective without efficient national and international enforcement.

Yet another loophole in CITES exists in article VII. When a new party accedes to CITES, or when a new species is

219. *Id.* at 134.

220. *Id.* See also McFadden, *supra* note 217, at 317.

221. Comment, *supra* note 8, at 10225.

222. Melak, *supra* note 5, at 263.

223. Schonfeld, *supra* note 4, at 151.

224. *Id.*

225. *Id.*

226. *Id.*

listed, there is a lag time which enables a dealer to legally export specimens acquired before the new regulations come into effect.²²⁷ Thus, dealers can stockpile specimens in anticipation of new regulations. Great Britain undertook stockpiling immediately before CITES' ratification. When Great Britain was a non-party, dealers imported approximately twenty-seven thousand ocelot skins per year.²²⁸ When Britain announced its intention to ratify CITES, this number rose to fifty thousand ocelot skins per year.²²⁹ Stockpiling can have a significant adverse effect on the species being imported. A particular population of animals may survive when a steady number of them are killed each year, but a sudden increase in animals killed could decimate the entire population.

CITES also permits contracting parties to enter reservations to the listing of a particular species.²³⁰ This is similar to the objection and opt-out procedures found in other wildlife treaties.²³¹ Major wildlife importers enter reservations frequently. For example, the USSR has entered six reservations of appendix I species (five of them on whales), and Japan has entered reservations to six whales and seven reptiles.²³² This procedure allows contracting parties to comply with CITES when it suits their needs, but to legally violate CITES when the economic incentive is simply too great to ignore.²³³

CITES' deterrence mechanisms are also ineffective. Without strict fines or criminal sanctions, violators continue to trade illegally imported and exported specimens. In 1978, twenty-five hundred illegally imported alligator hides were seized from a dealer. The hides were valued at over one million dollars, yet the dealer was fined only thirty-five dollars per hide.²³⁴ In 1979, three hundred and nineteen illegally imported cheetah skins were seized. The skins were valued at

227. CITES, *supra* note 191, art. VII(2).

228. Melak, *supra* note 5, at 257.

229. *Id.*

230. CITES, *supra* note 191, art. XXIII(2).

231. See *supra* text accompanying notes 27, 39-40 & 85.

232. Schonfeld, *supra* note 4, at 132.

233. *Id.* at 130-31.

234. *Id.* at 154.

over forty-four thousand dollars, yet the perpetrators were fined a total of fifteen hundred dollars.²³⁵ Violators should be fined the value of the entire shipment. This may force violators into bankruptcy and thus out of business. Furthermore, mandatory jail terms for violators would ultimately result in a number of dealers going out of business. Moreover, increasing the size of the fines, as well as utilizing mandatory jail terms, would deter prospective violators from entering the illegal wildlife trade. If CITES really is to bring species back from the brink of extinction, illegal trade in these species must be halted.

Unfortunately, international wildlife trading can be so lucrative that people may always be willing to take significant risks.²³⁶ In the developing nations of Africa, Latin America, and Asia, the sale of one animal can support a farmer for the remainder of his life.²³⁷ This incredible monetary incentive, coupled with the impoverished lifestyle that many of these people lead, contributes to the ineffectiveness of CITES. Despite its reputation for effectiveness, proponents of CITES are unable to give one example of a species that the Convention has helped.²³⁸ Wildlife trade is rampant and difficult to control. For example over fifty thousand shipments of wildlife and wildlife products enter the United States each year, with only fifty-five wildlife inspectors working at the nine ports of entry designated for wildlife.²³⁹ In 1983, the United States Fish and Wildlife Service randomly inspected fifty imported shipments, and illegally imported wildlife was found in thirty of them.²⁴⁰

The loopholes contained in CITES must be closed to render the Convention effective in halting illegal wildlife trade. Perhaps more importantly, national enforcement must be increased in each contracting country. If the ultimate recipients of illegally imported wildlife and wildlife products

235. *Id.*

236. Comment, *supra* note 8, at 10227.

237. Melak, *supra* note 5, at 250.

238. Comment, *supra* note 8, at 10228.

239. *Id.* at 10229.

240. *Id.*

were penalized along with the sellers and dealers, trade would probably decrease. Finally, educating tourists and indigenous peoples that their survival depends on the survival of other animals may slow the volume of trade. Tourists should be encouraged to visit these wild animals in their natural habitats. Increased tourism would allow people in developing countries to profit without killing the animals indigenous to the area.

N. *International Application of the Endangered Species Act*

The Endangered Species Act (ESA) was enacted on December 28, 1973.²⁴¹ In the ESA, the United States pledges to conserve wildlife pursuant to CITES, the Western Hemisphere Convention, the US-GB, US-M, US-J, US-USSR, and numerous other international agreements.²⁴² However, the international scope of the ESA is limited.

Section 1537 of the ESA authorizes the President of the United States to provide financial assistance to foreign nations for species conservation programs.²⁴³ The Secretary of the Interior, acting through the Secretary of State, may encourage foreign governments to protect threatened or endangered species of wildlife.²⁴⁴ The ESA also allows the Secretary of the Interior to list species as endangered or threatened even if they are not indigenous to the United States.²⁴⁵ However, the Secretary is not authorized to designate, and thus protect, critical habitats for endangered species living outside of the United States.²⁴⁶

The ESA prohibits the importation of all species listed as endangered, regardless of whether they are indigenous to the

241. 16 U.S.C. §§ 1530-43 (1988).

242. 16 U.S.C. § 1531 (1988).

243. 16 U.S.C. § 1537(a) (1988).

244. 16 U.S.C. § 1537(b) (1988).

245. 16 U.S.C. § 1533(b)(1)(A)-(B) (1988).

246. Solicitor's Op.: Memorandum to the Associate Director, U.S. Fish and Wildlife Service, from the Assistant Solicitor for Fish and Wildlife, U.S. Dep't of Interior (Feb. 13, 1976); see also H.R. REP. No. 567, 97th Cong., 2d Sess., reprinted in 1982 U.S. CODE CONG. & ADMIN. NEWS 2807.

United States or not.²⁴⁷ The Secretary is authorized to promulgate regulations placing similar prohibitions on the importation of threatened species.²⁴⁸ Furthermore, individuals subject to the jurisdiction of the United States are prohibited from placing endangered species into the stream of commerce.²⁴⁹

Perhaps one of the most important aspects of the ESA, the requirement that federal agencies ensure that their actions do not jeopardize the continued existence of any endangered species,²⁵⁰ may not be applicable to federal actions outside of the United States. Although the proposed rules as they appeared in the Federal Register did not limit this requirement to actions solely within the United States,²⁵¹ the final rules limited the requirement to "any action . . . in the United States or upon the high seas."²⁵² The Defenders of Wildlife challenged this limitation in *Defenders of Wildlife v. Hodel*,²⁵³ and on February 15, 1989, the district court ordered the Secretary of the Interior to amend the regulation to include agency actions in foreign nations within the scope of section 1536.²⁵⁴ In April of 1989, the Interior Department filed a notice of appeal, and thus the matter is not yet settled. If the district court's order is affirmed, the international scope of the ESA will be extended. Thus endangered species outside of the United States will be afforded protection from federal actions taken abroad.

O. *The Lacey Act*

The Lacey Act²⁵⁵ makes it unlawful for any person to "import, export, transport, sell, receive, acquire, or purchase any fish or wildlife . . . taken or possessed in violation of any

247. 16 U.S.C. § 1538(a)(1) (1988).

248. 16 U.S.C. § 1533(d) (1988).

249. 16 U.S.C. § 1538(a)(1)(E)-(F) (1988).

250. 16 U.S.C. § 1536 (1988).

251. 48 Fed. Reg. 29,990 (1983).

252. 51 Fed. Reg. 19,926 (1986).

253. *Defenders of Wildlife v. Hodel*, 707 F. Supp. 1082 (D. Minn. 1989).

254. *Id.*

255. The Lacey Act, 16 U.S.C. § 3371 (1988).

law, treaty, or regulation.”²⁵⁶ Thus, the Lacey Act can be used to enforce CITES, the ESA, or even foreign laws that protect wildlife. Furthermore, the Lacey Act makes it unlawful to “make or submit any false record, account, label, or identification” of wildlife or wildlife products.²⁵⁷ While the prohibitions contained in the Lacey Act are very broad, the Act requires that the enforcing government agency know of, and prove the existence of foreign laws, some of which may be quite obscure.²⁵⁸ Despite this one difficulty, the Lacey Act has proved successful in a few cases.

In *Newell v. Baldrige*,²⁵⁹ the president of Far East Aquatic Imports imported tropical fish from Asian exporters. Dealers would call Newell and order fish using a code number. The National Marine Fisheries Service (NMFS) investigated Newell after a Seattle aquarium notified the NMFS that it received a Hawksbill sea turtle, an endangered species, from Far East Aquatic Imports. An agent set up a controlled buy of sea turtles from Newell. When the agent received the package, the label read “Pantherfish,” nevertheless, the agent found ten Pacific Ridley turtles inside the package. The NMFS charged Newell with violating the ESA by illegally importing, selling, and delivering an endangered species, and with violating the Lacey Act by transporting sea turtles in foreign commerce with improper labelling. Newell was found guilty and fined twenty-three thousand dollars.

In *United States v. 3,210 Crusted Hides of Caiman Crocodilus Yacare*,²⁶⁰ inspectors for the United States Fish and Wildlife Service examined a suspicious shipment that made an unscheduled stop in Miami, en route from Bolivia to France.²⁶¹ The airway bill and the CITES permit listed the shipment as *Caiman crocodilus crodilus*, a species that is not endangered.²⁶² Bolivia was given as the country of origin.²⁶³

256. 16 U.S.C. § 3372(a)(1) (1988).

257. 16 U.S.C. § 3372(4) (1988).

258. 16 U.S.C. § 4221(a)-(b) (1988).

259. 548 F. Supp. 39 (W.D. Wash. 1982).

260. 636 F. Supp. 1281 (S.D. Fla. 1986).

261. *Id.* at 1283.

262. *Id.* at 1282-1283.

However, the customs official noted that *Caiman crocodilus crodilus* was not native to Bolivia, and proceeded to examine the shipment.²⁶⁴ The shipment actually contained 10,870 hides of *Caiman crocodilus yacare*, an endangered species native to Bolivia.²⁶⁵

The United States then sought forfeiture of the caiman skins pursuant to the ESA and CITES. Bolivian law provides that caimans must be a certain size before they can be killed, and most of the confiscated hides were smaller than the required size.²⁶⁶ Thus, the United States also sought forfeiture of the hides pursuant to the Lacey Act.²⁶⁷ The court held that the entire *res* was subject to forfeiture pursuant to the Lacey Act and CITES.²⁶⁸

These cases indicate that the courts are willing to penalize defendants for violations of foreign law pursuant to the Lacey Act. Thus, the Lacey Act can be a powerful tool when shipments of wildlife are either mislabeled, or are shipped in contravention of foreign laws.

P. *The African Elephant Conservation Act*

The most recent piece of international wildlife legislation is the African Elephant Conservation Act (AECA) of 1988.²⁶⁹ The United States, recognizing the soaring global demand for ivory and the steady decline in elephant populations, enacted the AECA "to assist in the conservation and protection of the African elephant."²⁷⁰ The AECA authorizes financial assistance to African-elephant-conservation programs²⁷¹ and the AECA also prohibits the importation of ivory from ivory-producing countries that do not adhere to CITES and do not

263. *Id.* at 1283.

264. *Id.*

265. *Id.*

266. *Id.* at 1285.

267. *Id.*

268. *Id.* at 1287.

269. 16 U.S.C. §§ 4201-4245 (1988).

270. 16 U.S.C. § 4203(1) (1988).

271. 16 U.S.C. § 4211 (1988).

have an effective elephant conservation program.²⁷² The Secretary of the Interior is authorized to establish a moratorium on the importation of ivory from intermediary countries that do not adhere to CITES.²⁷³

In addition the AECA makes it unlawful for any person to import raw ivory from any country other than an ivory-producing country,²⁷⁴ or to import ivory from an ivory-producing country in violation of that country's laws.²⁷⁵ Furthermore, it is illegal for any person to "import raw or worked ivory from a country for which a moratorium is in effect."²⁷⁶ The Secretary of the Interior has already established a moratorium on the importation of ivory from seventy-nine countries.²⁷⁷

It is still too early to tell whether the AECA will be effective in halting the illegal importation of ivory into the United States. The AECA is drafted well and imposes mandatory duties upon the Secretary of the Interior to collect information from foreign governments on elephant conservation programs.²⁷⁸ The Secretary must then make a determination as to whether the United States will accept ivory from these countries.²⁷⁹ A complete moratorium on the importation of all ivory may be more effective in saving the African elephant. On the other hand, a complete ban may simply drive the trade underground, where it will be more difficult to control.

Part II: Recommendations

All of the treaties, conventions, and acts discussed in this article have certain flaws, however some flaws are far more detrimental to the conservation of wildlife than others. One major problem is that countries may attempt to protect particular species of wildlife without protecting the habitat within which the species live. For example, the polar bear

272. 16 U.S.C. § 4221(b)(A)-(E) (1988); *see also* Schonfeld, *supra* note 4, at 132.

273. 16 U.S.C. § 4222(b) (1988).

274. 16 U.S.C. § 4223(1) (1988).

275. 16 U.S.C. § 4223(3) (1988).

276. 16 U.S.C. § 4223(5) (1988).

277. 53 Fed. Reg. 52,243 (1988).

278. 16 U.S.C. § 4221(a)-(b) (1988).

279. 16 U.S.C. § 4222(a)(1) (1988).

would still be in danger of extinction even if all hunting was stopped. The toxins and pollutants that have invaded the bears' habitat, food supply, and body tissues may eventually lead to the decimation of the entire population.²⁸⁰ International wildlife laws must not only address the problem of illegal killing and trade, but must effectively combat pollution and halt habitat destruction.

International wildlife laws should also impose strict liability on all parties who are involved in an illegal transaction. If the ultimate recipient is forced not only to forfeit the object purchased, but is also faced with a harsh fine or a prison sentence, fewer individuals will risk buying objects that are at all suspect. A closely related recommendation is for greater education. All travelers should be given pamphlets warning them of the illegality of wildlife trade in endangered species on the planes, ships, or trains that carry them to foreign countries. Shock value would work well here: pictures of slaughtered elephants and poached gorillas would certainly have a more lasting impact than a verbal warning. If tourists continue to buy wildlife products, regardless of whether they are confiscated at the border, more animals will be killed.

Dealers and poachers should be faced with mandatory jail sentences and extremely harsh fines. Money collected from these fines can be used to educate other people, and to create effective wildlife conservation programs. The small fines that are levied under current laws do little to put dealers out of business. Furthermore, local people in developing countries should be paid to show tourists live wildlife in natural habitats, or should be hired to form anti-poaching patrols. The desire for money is behind virtually every illegal wildlife transaction. If we can create monetary incentives to keep these animals alive, the illegal trade in wildlife would decrease.

Domestic legislation such as the MMPA, ESA, Packwood and Pelly Amendments, and National Environmental Policy Act, should, where necessary, be extended to expressly include jurisdiction over United States' interests and individuals oper-

280. See Kindt and Wintheiser, *supra* note 29, at 349.

ating overseas. Jurisdiction and regulation of foreign businesses operating in United States' waters or trading in the United States should also be extended to fully cover those operators. Commercial interests in the United States that avoid regulation by, for example, reflagging fishing vessels under a foreign registry, should not be able to use this subterfuge to avoid compliance with domestic legislation. Moreover, where enforcement restrictions exist to compel foreign compliance with United States law, that enforcement should be pursued vigorously.

It may also be possible to purchase vast tracts of land and establish parks or reserves as common heritage resources. Some natural resources, such as the water-recycling capabilities of the Brazilian rain forests, provide benefits that extend far beyond national borders. If developed countries were to purchase large tracts of this rain forest from the Brazilian government, the Brazilians would be compensated for the "loss" of the land (which they now use for timber and agricultural purposes). In exchange for their money, other countries would ensure that the rain forests would remain intact and thus continue to purify the world's fresh water supply. In this scenario, the forest assumes the character of other common heritage resources, and would be preserved as such for the benefit of all.

International observer schemes, like those used by the IWC, should be initiated at all ports of entry designated for wildlife. Exporting countries should train officials in importing countries to recognize wildlife products that may be unfamiliar to importing officials. Governments should allow officials from other nations to randomly inspect shipments of wildlife products, and to observe procedures used to monitor these shipments. This may alleviate instances of bribery, sloppiness, and honest mistakes, and thus decrease the number of illegal shipments that slip through the borders.

All ports of entry should have manuals describing wildlife products in which trade is prohibited, and each manual should be supplemented with confiscated examples of these products (when possible). This manual should be uniform so that all countries will have the same basis for deciding

whether a product is being legally exported or imported. The burden of proving that the importation or exportation of the wildlife product is legal should be with the shipper, not with the customs official.

Finally, treaties and conventions must be more strongly drafted, imposing mandatory duties of preservation on the respective parties. Loopholes must be closed. For example, parties should make it difficult for an individual to qualify for an exception to prohibitions on taking and trade. Citizen suit provisions should be installed in all international wildlife laws, allowing a party's own citizens to sue for violations of the law. Wildlife injured by a country's actions should be granted standing to sue in their own behalf.²⁸¹ Furthermore, international enforcement mechanisms should be developed to allow one country to bring another country before an international tribunal for violations of the treaties or conventions.

Conclusion

The environment, as no other area can, demonstrates the growing interdependency of life in the modern world. Clearly we need to develop an environmental ethic that will allow us as a world community, to address the interrelated nature of the threat to global ecological survival. We proceed all too often in haphazard fashion, developing one resource and preserving another without reference to any socio-economic-ethical-scientific foundation that will allow us to make rational long-term decisions. In the area of wildlife preservation, the most common mistake lies in seeking to protect specific animal species without regard to the protection of the habitat upon which those species depend for life. Individuals or private commercial interests often sacrifice long-term economic stability for the false promise of short-term profits, while the governments of the world appear to be more concerned with

281. C. STONE, *EARTH AND OTHER ETHICS: THE CASE FOR MORAL PLURALISM* (1987). Building on his work in *Should Trees Have Standing*, 45 SO. CAL. L. REV. 450 (1972), Professor Stone offers a comprehensive intellectual justification and practical method for enabling natural objects to bring suit on their own behalf to redress harms inflicted by the human community.

protecting their abstract sovereignty rights than with preserving the viability of common resources that serve their people.

We must find ways of addressing the causes and effects of wildlife loss, not merely the glaringly recognizable symptoms. The carrying capacity of land-based ecosystems which provide essential services such as flood control and water purification as well as the productivity of the land for food crops is in serious jeopardy. Desertification, the widespread destruction of the biological productivity of arid and semi-arid ecosystems leading to an absence of perennial life and deforestation, primarily the destruction of tropical rain forests due to land clearing for agriculture, timber exploitation, and charcoal production are two of the main causes and effects of the destruction of the global environment.²⁸² The World Commission on Environment and Development estimates that six million hectares of productive dryland are desertified each year, and eleven million hectares of forests are cleared yearly.²⁸³ Hundreds of millions of hectares are threatened, principally in Asia, Africa, and Latin America. Moreover, it is not merely tropical forests and productive arid lands that are threatened with destruction. Both the Arctic and Antarctic are under pressure from mineral exploitation and other extractive industries.²⁸⁴

Directly related to the destruction and loss of productive land is the rapidly increasing loss of species diversity. The potential extinction of North American wolves, Florida panthers, African rhinoceros, African elephants, California condors, the American bald eagle, Montana's grizzly bear population, and at least five species of whales, is cause for great alarm. It offends both our aesthetic and humanitarian senses. However, there is greater cause for alarm in the potential loss of thousands of other species of wildlife and plants unknown to most of the world. Peter Raven, Director of the Missouri Bo-

282. INDEPENDENT COMMISSION ON INT'L HUMANITARIAN ISSUES, *THE HUMANITARIAN ASPECTS OF DESERTIFICATION, THE ENCROACHING DESERT* 19 (1986).

283. *OUR COMMON FUTURE*, *supra* note 3.

284. Lee, *Oil In the Wilderness: An Arctic Dilemma*, 174 NAT'L GEOGRAPHIC 858 (1988).

tanical Garden, predicts that an average of one hundred species of wildlife and plants will be driven into extinction every day for the next three decades — a rate one thousand times the pace that has prevailed since prehistory.²⁸⁵ As Dr. Paul Erlich writes in *The Loss of Diversity: Causes and Consequences*, “the primary cause of the accelerating loss of biological diversity is not direct exploitation or human malevolence, but rather is attributed to the loss of habitat from expansion of human population and activities.”²⁸⁶ He writes that the most important anthropocentric reason for preserving diversity is the rate that microorganisms, animals, and plants play in providing essential ecosystem services such as water purification, production of oxygen, etcetera.²⁸⁷ Moreover, twenty-five percent of the pharmaceuticals in use today are originally derived from plants, and new genetic transfer technology is making possible significant advances in agriculture for improved yields, the use of non-toxic (natural) pesticides, and alternative sources of paper.²⁸⁸ Particularly problematic is the accelerating loss of the world’s tropical forests, which while covering a mere seven percent of the earth’s surface, are home to between fifty and eighty percent of the planet’s species.²⁸⁹

Given the enormity and nature of the threat to the world’s wildlife population, we have not been able to address in a comprehensive fashion potential solutions to the dilemma of decreasing species diversity. The scope of our work has necessarily been limited to examining the United States’ role in international regulation and wildlife preservation efforts. We plan to continue our work and hope that others will build upon the effort.

We suggest that a concerted international effort, one in which the United States by reason of fortunate advantage can play a leadership role, is essential to preserving wildlife. Some of our recommendations may seem drastic or inconceivable.

285. Linden, *The Death of Birth*, TIME, Jan. 2, 1989, at 32.

286. Erlich, *The Loss of Diversity: Causes and Consequences*, BIODIVERSITY 21 (1986).

287. *Id.* at 2-3.

288. Linden, *supra* note 285, at 33-35.

289. *Id.* at 32.

However, our planet and its ability to support life is rapidly reaching finite limits, and drastic measures may be needed to assure continued development and survival. It is no longer enough to allow countries to deal with their wildlife unilaterally. The nations of the world must unite to protect and preserve wildlife species that have survived human expansion and exploitation so far. These species are our "common heritage." If effective, cooperative agreements and laws are not enacted and enforced now, we may lose numerous animal species, including ourselves.

As we opened with a passage from a natural philosopher of the eighteenth century, we will conclude this essay with a passage from the work of a natural philosopher of the twentieth century:

We must search in our way of life, I think, for substantially more here than economic expansion and continued good hunting. We need to look for a set of relationships similar to the ones . . . admired among the Eskimos. We grasp what is beautiful in a flight of snow geese rising against an overcast sky as easily as we grasp the beauty in a cello suite; and intuit, I believe, that if we allow these things to be destroyed or degraded for economic or frivolous reasons we will become deeply and strangely impoverished.²⁹⁰

290. LOPEZ, *A Reflection on White Geese*, in *CROSSING OPEN GROUND* 19, 38 (1989).