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KEVIN D. HILL*

> "I had seen a herd of elephants traveling through dense native forest . . . pacing along as if they had an appointment at the end of the world."[1]
>
> Isak Dinesen (Karen Blixen)

I. INTRODUCTION

Since its inception in 1975, the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES")[2] has had mixed success in meeting its goal of protecting endangered species from international trade. While CITES has effectively eliminated trade in some species such as exotic cats, commercial hunting still threatens the survival of elephants, sea turtles, and many other species.

Human beings present two principal threats to wildlife. The most serious threat to wildlife is habitat destruction. The territory necessary to sustain wildlife is disappearing in proportion to the rapidly expanding human population. Wetlands are drained for housing, rain forests are logged for lumber, land is cleared for farms, and fields and forests are bulldozed for the construction of roads and highways.

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1. I. DINESEN, SHADOWS ON THE GRASS (1960). Isak Dinesen's (Karen Blixen) experiences were immortalized in her book, and the popular movie, *Out of Africa*.

2. 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].

The second principal threat to wildlife is the commercial exploitation of wild animals through hunting and trapping. International trade in wildlife is an enormous industry. It is estimated that the industry generates as much as five billion dollars annually.[3] The central issue facing regulation of wildlife trade is finding the appropriate balance between the economic value of taking wildlife and the value of wildlife preservation. Unfortunately, the balancing often results in a zero-sum conflict in which commercial interests and preservation cannot coexist.[4]

The plight of the gorilla population in Rwanda exemplifies the extreme difficulty in striking a balance between these competing interests. Rwanda is one of the poorest sub-Saharan countries in Africa.[5] It has a population of 4.7 million people, 95% of whom are subsistence farmers who eke out a living on two-acre farms.[6] Unfortunately, the human population is expanding at an annual rate of 4%, adding 23,000 new families to the land each year.[7] The scarcity of land and lack of alternate sources of income compelled many Rwandans to supplement their income by exploiting the wildlife on the forty-square-mile gorilla preserve known as the Parc National Des Volcans. Poaching became endemic in the park. Many gorillas were captured alive and sold on the black market to European and American zoos; many more were killed by snares set for antelope and deer.[8] Despite laws strictly prohibiting poaching, the gorillas were simply not safe without an economic motive for their protection. No matter

3. The World Wildlife Fund has estimated the declared value of the international wildlife trade to be $5 billion. *World Trade in Wildlife*, WORLD WILDLIFE FUND FACTSHEET (1986). It is difficult to calculate accurately the volume of trade given its immense proportions, its tendency to involve exotic species, and the difference in price between the raw commodity and the retail product. Nonetheless, the trade volume is very large. For example, in 1984, over 200,000 psittacines (parrots, parakeets, cockatoos, macaws, lories, and lorikeets) were legally imported into the United States for sale as pets. During the same period of time, as many as 60,000 more may have been smuggled into the country. Dixon, *Evaluation of the Psittacine Importation Process in the United States*, WORLD WILDLIFE FUND 3 (1986).

4. A zero-sum conflict is a situation in which the preferences of the participants within the available alternatives are diametrically opposed. In other words, there can only be a winner and a loser with no room for compromise or cooperation. Most analysts agree that zero-sum conflicts are the exception rather than the rule in real-world conditions. For a comprehensive discussion of zero-sum "games," see generally A. RAPOPORT, TWO-PERSON GAME THEORY (1966).

5. *World Development Report*, WORLD BANK 202, tab. 1 (1987).

6. Cahill, *Love and Death in Gorilla Country*, in A WOLVERINE IS EATING MY LEG 31 (1989).

7. *Id.*

8. *Id.* at 30.

how many antipoaching patrols were established, the Rwandan people's financial and nutritional needs overcame enforcement efforts.

In response to this economic pressure, coupled with the fear that the gorilla population would completely disappear, the Rwandan government opened the park to tourism.[9] The opening of the park alleviated the threat to the gorilla population in Rwanda, in part, because it made more economic sense to preserve a viable population as a tourist attraction than to poach and ultimately exterminate the gorillas.

Preservationist groups opposed opening the park to tourists. One such advocate was Dian Fossey, a secular saint in wildlife preservation.[10] Fossey fiercely believed that humans should preserve gorillas and other wildlife for their intrinsic value. The concept of economic valuation of the animals was alien to her. Thus, she vehemently opposed the opening of the park to tourists even though it created an important source of income for Rwanda.[11] Despite Fossey's opposition, the opening of the park to tourism eventually solved the gorilla poaching problem.[12] Meanwhile, the Rwandan government initiated a campaign to educate the local people as to both the economic and aesthetic benefits of preserving wildlife.[13]

The dichotomy between a principled concern for animals and the economic pressure for wildlife commerce pervades the entire conservation movement and presents a particular problem for CITES' operation. This Article examines the structure of the convention and focuses on three case histories in which the convention was ineffective in limiting wildlife trade because it inadequately addressed the strong economic pressures of the human population.

II. Convention on International Trade in Endangered Species

CITES was drafted in 1973 and has been hailed as the most successful international treaty on the conservation of wildlife.[14] Twenty-

9. *See id.* at 32.

10. *See generally* F. Mowat, Woman in the Mists 162-75 (1987).

11. Dian Fossey's work with the mountain gorillas in Rwanda is recorded in her own journals, a biography by Farley Mowat, and a recent film starring Sigourney Weaver. Fossey's antipathy toward tourism is well documented in F. Mowat, *supra* note 10; *see also* Cahill, *supra* note 6. Fossey's concerns were not unfounded; visitors may have transmitted human diseases to gorillas. F. Mowat, *supra* note 10, at 348-49.

12. *See* F. Mowat, *supra* note 10, at 36.

13. Cahill, *supra* note 6. For a more pessimistic view, see F. Mowat, *supra* note 10, at 370-71.

14. For the most in depth discussion, see generally D. Favre, International Trade

one nations initially signed the treaty; however, participation has expanded at such a remarkable rate that by 1988 the treaty had ninety-eight signatories.[15] CITES attempts to control wildlife trade by requiring special export and import permits for international commerce in endangered species.

A. Overview

The convention focuses exclusively on the regulation of international trade.[16] It contains no restrictions on domestic trade or requirements for habitat protection that could be construed as infringements on sovereignty. Although the treaty establishes a permanent Secretariat for administrative purposes,[17] it creates no supranational enforcement structure. Nevertheless, it does require parties to designate one "Management Authority" to grant import and export permits and at least one "Scientific Authority" to determine whether trade in a particular species is detrimental to its survival.[18]

1. United States' Adoption of CITES

The United States Congress ratified and implemented CITES as one part of the Endangered Species Act ("ESA").[19] The United States Supreme Court has characterized the ESA as "the most comprehensive legislation for the preservation of endangered species ever

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IN ENDANGERED SPECIES (1989); S. LYSTER, INTERNATIONAL WILDLIFE LAW 240 (1985); Kosloff & Trexler, *The Convention on International Trade in Endangered Species: No Carrot, But Where's the Stick?*, 17 ENVTL. L. REV. 10222 (1987).

15. The signatory countries as of 1988 include: Afghanistan, Algeria, Argentina, Australia, Austria, The Bahamas, Bangladesh, Belgium, Belize, Benin, Bolivia, Botswana, Brazil, Cameroon, Canada, Central African Republic, Chile, China, Columbia, Congo, Costa Rica, Cyprus, Denmark (including Greenland and the Faroe Islands as soon as authorities enact the appropriate legislation), The Dominican Republic, Ecuador, Egypt, Finland, France, Gambia, German Democratic Republic, Federal Republic of Germany, Ghana, Guatemala, Guinea, Guyana, Honduras, Hungary, India, Indonesia, Iran, Israel, Italy, Japan, Jordan, Kenya, Kiribati, Liberia, Liechtenstein, Luxembourg, Madagascar, Malawi, Malaysia, Mauritius, Monaco, Morocco, Mozambique, Nepal, The Netherlands, Nicaragua, Niger, Nigeria, Norway, Pakistan, Panama, Paupua New Guinea, Paraguay, Peru, The Philippines, Portugal, Rwanda, St. Lucia, Senegal, Seychelles, Singapore, Somalia, South Africa, Spain, Sri Lanka, Sudan, Suriname, Sweden, Switzerland, Tanzania, Thailand, Togo, Trinidad & Tobago, Tunisia, Tuvalu, Union of Soviet Socialist Republics, United Arab Emirates (the first signatory to withdraw from the convention), United Kingdom (including Hong Kong, the Channel Islands, Bermuda and various other Crown territories), United States, Uruguay, Venezuela, Zaire, Zambia, Zimbabwe. 1987 TREATIES IN FORCE 230.

16. D. FAVRE, *supra* note 14, at xvii.

17. CITES, *supra* note 2, art. XII.

18. *Id.* art. IX.

19. 16 U.S.C. §§ 1531-44 (1988).

enacted by any nation."[20] The ESA attempts to preserve ecosystems by regulating domestic and international trade in threatened species and by protecting important habitats.[21]

The Act explicitly prohibits the trade of any wildlife in contravention of CITES or the possession of specimens obtained through unlawful trade.[22] CITES also lists approximately fifty percent of the species protected by the ESA.[23] Generally, the ESA is more restrictive than CITES; the ESA only permits the importation or exportation of protected species for scientific research, enhancement of species propagation, and for certain types of exhibitions.[24]

In addition, CITES dovetails with the Lacey Act,[25] which makes it a violation of federal law for any person to import or export animals taken, transported, or sold in violation of a treaty or the laws of a foreign country.[26] As originally enacted in 1900, the purpose of the Lacey Act was merely to prohibit interstate commerce in wildlife taken, possessed, transported, or sold in violation of state law. However, in 1935, Congress expanded the Lacey Act to apply to foreign commerce, and in 1981, it was consolidated with the Black Bass Act.[27] These changes toughened the penalty provisions of the Lacey Act, making it the most effective enforcement device for federal wildlife officials.[28]

2. United States' Enforcement of CITES

In order to effectively enforce CITES, the United States has designated nine cities as ports of entry for trade in wildlife and fourteen

20. Tennessee Valley Authority v. Hill, 437 U.S. 153, 180 (1978).

21. The stated purposes of the ESA are to preserve ecosystems, to conserve endangered and threatened species, and to achieve the purposes of many treaties. 16 U.S.C. § 1531(b). The ESA designates the Secretary of the Interior as both the Management Authority and Scientific Authority for the issuance of import and export permits. *Id.* § 1537(a).

22. *Id.* § 1538.

23. *Compare* 50 C.F.R. § 23.23 (1989) (CITES list) *with* 50 C.F.R. §§ 17, 18 (1989) (ESA list).

24. CITES, *supra* note 2, art. XIV. Article XIV of CITES specifically allows for domestic legislation with stricter controls than those provided by the convention.

25. 16 U.S.C. §§ 3371-78.

26. *See generally Cites 1983 Annual Report No. 9*, FEDERAL WILDLIFE PERMIT OFFICE (1983) [hereinafter *Annual Report*].

27. *Id.*

28. *Hearings before the Subcomm. on Envtl. Pollutions of the Senate Comm. on Env't and Public Works*, 98th Cong., 2d Sess. 9-10 (1984) (statement of F. Henry Habicht, Asst. Attorney General, Land and Natural Resources Division, Dep't of Justice) [hereinafter *Hearings*].

cities as entry destinations for trade in plants.[29] At these locations, agents and inspectors of the United States Fish and Wildlife Service ("Wildlife Service") inspect the wildlife with assistance from customs agents and other federal agents. Customs officials interdict illegal shipments of wildlife at all ports other than those designated a port of entry.[30]

While CITES, the ESA, and the Lacey Act provide an impressive array of legal tools to regulate trade in endangered species, enforcement is hampered by a lack of personnel and administrative resources. For example, in 1983, 43,000 shipments of wildlife were imported into the United States and 12,000 were exported, for an approximate total of 55,000 shipments.[31] The Wildlife Service has a total of only fifty-five wildlife inspectors spread among the nine ports of entry designated for wildlife, making systematic inspection virtually impossible.[32] Furthermore, United States Customs agents and Border Patrol officers lack sufficient education to identify species and tend to place a higher priority on the prevention of drug smuggling.[33]

Article VIII of CITES requires signatory countries to take appropriate measures to enforce the treaty, including provisions outlining penalties and confiscations.[34] However, the specific methods of enforcement are left to the individual parties.[35] Such methods may include penalties of jail sentences or monetary fines. Unfortunately, the fines and sentences that have been imposed have been light. Consequently, confiscation of contraband has been the most effective and commonly-used enforcement device.[36]

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29. The ports of entry are New York, Miami, Chicago, San Francisco, Los Angeles, New Orleans, Dallas–Fort Worth, Seattle, and Honolulu. 50 C.F.R. § 14.12. The Department of Agriculture is primarily responsible for CITES' enforcement with respect to plants. It has restricted the importation and exportation of all plants to fourteen ports in order to facilitate quarantine controls. These are Nogales, Los Angeles, San Diego, San Francisco, Miami, Honolulu, New Orleans, Hoboken, New York, San Juan, Brownsville, El Paso, Laredo, and Seattle. 49 Fed. Reg. 42,938 (1984).

30. 50 C.F.R. §§ 14.51-.54.

31. *Annual Report*, *supra* note 26.

32. Kosloff & Trexler, *supra* note 14, at 10229.

33. *Hearings*, *supra* note 28, at 16-19 (statement of William R. Logan, Director, Office of Investigations, United States Customs Service).

34. CITES, *supra* note 2, art. VIII.

35. *Id.* art. VIII(1).

36. In practice, confiscation seems to be the strongest financial deterrent. Fines are frequently small, but the possibility of losing valuable goods significantly increases the risk in any risk-benefit calculation. For example, a Canadian who illegally imported worked ivory into Canada in 1978 reportedly suffered a small fine, but lost $150,000 worth of ivory. S. LYSTER, *supra* note 14, at 265.

Confiscation can be an effective deterrent because the loss of a valuable consignment may inflict a serious financial blow on the importer. However, it can also present difficulties for the enforcing agency. Fear of disease and the high cost of returning the wildlife to its natural habitat severely impede reintroduction of confiscated animals. The problem is exacerbated by the convention's requirements that the state of import, often a relatively poor developing country, must pay the cost of reintroduction.[37] For example, in 1978, United States Customs agents seized eighteen rare and almost extinct Tahitian lories illegally smuggled into the United States.[38] The birds were still alive after the seizure, but could not be returned to their natural habitat because authorities feared they may have been exposed to avian diseases in the United States which are not present in Polynesia. The customs authorities then faced the difficult task of finding a refuge for the lories. The birds were eventually presented to the San Diego Zoo in lieu of being returned to the wild.[39]

B. The CITES' Appendices

CITES contains three appendices that categorize species on the basis of their real or potential danger of extinction from trade.[40] With a few exceptions, the appendices prohibit international trade in the listed species without certain required permits. The permit requirements extend to specimens living or dead and include "any readily

37. The wildlife trade overwhelmingly flows from South to North. The developing nations of South America, Africa, and Asia are generally the suppliers, while the wealthy industrialized nations of Europe, North America, Australia, and Japan are the consumers. T. MILLIKEN, DECIMATION OF WORLD WILDLIFE: JAPAN AS NUMBER ONE (1988). However, there are exceptions; the United States is both a consumer and a major supplier of wildlife. *Id.*

38. Leakey, *Lifting the Ban Would Mean Open Season*, The Independent, June 30, 1990, at 13.

39. *Amending the Black Bass and Lacey Acts: Hearings on S. 1882 Before the Subcomm. on Resource Protections of the Senate Comm. on the Env't and Public Works*, 96th Cong., 1st Sess. 29 (1979) (statement of William Green, Director, Office of Investigations, United States Customs Service). Article VIII(4)(b) of CITES requires the state confiscating the shipment to consult with the state of export and "return the specimen to that state at the expense of that state, or to a rescue center or such other place as the Management Authority deems appropriate and consistent . . . [with the treaty]." CITES, *supra* note 2, art. VIII(4)(b).

Occasionally confiscations have resulted in the reintroduction of a species which died out in the United States. When thick billed parrots smuggled from Mexico were seized, they were reintroduced into a former habitat in the Chiricahua Mountains of Southern Arizona. L.A. Times, Dec. 20, 1987, at 1, col. 1. Unfortunately such success stories are rare. When 205 Amazon parrots were seized, the Wildlife Service was forced to lodge them at Bush Gardens in Van Nuys, California at the eventual cost of $100,000. Wash. Post, Oct. 13, 1978, § C, at 2.

40. CITES, *supra* note 2, apps. I, II, IV.

recognizable part or derivative thereof."[41] This effectively regulates products containing the hides, skins, teeth, or other parts of protected animals.[42]

Appendix I of CITES contains a list of "all species threatened with extinction which are or may be affected by trade."[43] CITES effectively prohibits international commercial trade in Appendix I species. When CITES first went into effect, Appendix I contained approximately 450 species including such well-known endangered species as tigers, cheetahs, humpback whales, and peregrine falcons.[44] It also included less publicized endangered species such as the Komodo lizards, lemurs, and various types of crocodiles.[45] Since then, Appendix I has grown to include over 700 animal species and several thousand plant species.[46]

CITES does allow noncommercial trade in Appendix I species in very limited circumstances. The shipper must first obtain an export permit from the country of origin and an import permit from the country of destination.[47] Under the treaty, the designated Scientific Authority of the country of origin will grant an export permit only if it is determined that the "export will not be detrimental to the survival of that species."[48] Then, the designated Management Authority must determine whether the shipper acquired the specimen legally, and whether the country of designation granted an import permit for the plant or animal.[49] Similarly, the Scientific Authority of the state of import must determine whether the import is for purposes detrimental to the survival of the species, and the Management Authority must determine whether the plant or animal will be used for primarily commercial purposes, before an import permit will be granted.[50]

Appendix II contains species which are not sufficiently endangered by international trade to warrant their inclusion in Appendix I.[51] Nevertheless, these species are in sufficient danger to warrant

41. *Id.* art. I(b).
42. *Id.*
43. *Id.* art. II(1).
44. *Id.* app. I.
45. *Id.*
46. *See id.*
47. *Id.* art. III(2), (3).
48. *Id.* art. III(2)(a).
49. *Id.* art. III(2)(b), (d).
50. *Id.* art. III (3).
51. *Id.* art. II(2)(a).

some control of trade.[52] Appendix II species include those which are heavily traded but have relatively stable populations. Approximately 40,000 species of plants and animals are listed in Appendix II. However, the size of the list is misleadingly small since it often lists plants and animals by their family names rather than their specific species. For example, Appendix II names as a single entry the family *orchidacae* which includes 400 to 800 genera of orchids and comprises 25,000 to 35,000 different species.[53] To facilitate identification, the Appendix also lists species which are not threatened, but are similar in appearance and "look-like" threatened species.[54] This provision is particularly important in enforcing trade restrictions on genera such as parrots, frogs, or crocodiles where even specialists have difficulty distinguishing among species.[55]

In 1973, the Plenipotentiary Conference in Washington drafted the original lists of species for Appendices I and II. Any signatory country may suggest additions of species to the appendices. These suggestions must be supported by strong empirical evidence of endan-

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

53. *The International Orchid Trade*, AUDUBON WILDLIFE REPORT 377 (1988–1989). Authorities differ on the exact number of species. *Id.*

54. CITES, *supra* note 2, art. II(2)(b). The United States has taken the position that if a species is listed in Appendix II for "look-like" reasons alone, the export state need not determine whether proposed exports of the species will be detrimental to the survival of that species. The export state need only evaluate if the survival ability of the endangered species will be threatened by proposed exports of the look-like species. For example, the Wildlife Service decided that bobcats were listed in Appendix II for purely look-like reasons. As a result, it was not necessary for the service to calculate whether the proposed export levels of bobcat pelts would be detrimental to the survival of bobcats. The service only needed to consider whether proposed export levels would be detrimental to the survival of other spotted cats which the bobcat was listed to protect. 48 Fed. Reg. 37,494 (1983). Other parties to the convention have taken issue with this view, arguing that once a species is listed under article II(2)(a) or II(2)(b), it should be accorded full protection. *See* CITES, PROCEEDINGS OF THE FOURTH MEETING OF THE CONFERENCE OF THE PARTIES 139-40 (1984) [hereinafter FOURTH CONFERENCE PROCEEDINGS].

55. There are twenty categories of taxonomic classifications ranging from kingdom down to subspecies. CITES classifies most frequently by species. However, a higher taxon may be used when all of the species are threatened or when identification between species creates enforcement problems. The use of subspecies appears to be disfavored. *See* CITES, PROCEEDINGS OF THE SECOND MEETING OF THE CONFERENCE OF THE PARTIES Res. 2.20 (1980) [hereinafter SECOND CONFERENCE PROCEEDINGS].

One minor but vexing problem facing CITES is the lack of uniformity in taxonomic classifications. Accordingly, the parties have adopted standard texts for consistent classifications. For example, the *Dictionary of Flowering Plants and Ferns* was adopted as the standard reference for plants. *See* J.C. WILLIS, DICTIONARY OF FLOWERING PLANTS AND FERNS (1973). Similarly, authoritative works have been adopted for birds and mammals. FOURTH CONFERENCE PROCEEDINGS, *supra* note 54, at 77-78 (res. 4.23).

germent[56] and then approved by a two-thirds majority of the voting parties.[57] Additions to the appendices are considered either at the biennial meetings or by mail between the meetings.[58] Plants or animals may be removed from either list or transferred from one list to another by the same process. However, there is a strong presumption against changes that lower the level of protection for any given species.[59]

Appendix III differs from the first two appendices. It lists species that a signatory country internally regulates to prevent or restrict exploitation, but needs additional international cooperation for effective regulation.[60] Any member country may add a species to Appendix III if the species is endangered in that country, regardless of its status in the world at large. For example, the scarlet macaw was listed in Appendix III at the request of Costa Rica. However, this bird may be legally shipped from Panama where it is not endangered. Trade in species listed in Appendix III merely requires an export permit certifying that the shipper obtained the specimen legally.[61]

C. Exceptions to the CITES Permit Requirements

Article VII of CITES lists a series of exceptions to the permit

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56. CITES, *supra* note 2, art. XV(1)(a). The text of the convention provides broad conditions for including species in the appendices. More detailed criteria were later provided at the Berne Conference, held one year after the convention's entry into force. *See* CITES, PROCEEDINGS OF THE FIRST MEETING OF THE CONFERENCE OF THE PARTIES 31 (1976) [hereinafter FIRST CONFERENCE PROCEEDINGS]. The Berne Criteria have been criticized because of the vagueness of the adopted standards. *See* Favre, *Tension Points Within the Language of the CITES Treaty*, 5 B.U. INT'L L.J. 247, 249-52 (1987).

57. CITES, *supra* note 2, art. XV(1)(b).

58. *Id.* art. XV(1), (2).

59. The First Conference of the Parties, held in Berne, Switzerland, adopted specific criteria to amend the appendices which created a presumption against reducing the protection given to any species.

> The addition to and deletion from the appendices take (sic) different problems requiring different approaches by the conference. If an error is made by the conference by unnecessarily placing a plant or animal on an appendix, the result is the imposition of a documentation requirement. If however, it errs in prematurely removing a plant or animal from protection, or lowering the level of protection afforded, the result can be the permanent loss of the resource. If it errs it should be therefore toward protection of the resource.

FIRST CONFERENCE PROCEEDINGS, *supra* note 56, at 33 (conf. 1.3). The conference then established very strict conditions which must be met before a species' protection can be reduced. These conditions include "positive scientific evidence that the plant or animal can withstand the exploitation resulting from the removal of protection" and require a well-documented population survey of the species that justifies resuming unregulated commercial trade. *Id.*

60. CITES, *supra* note 2, art. II(3).

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

requirements for Appendices I, II, and III. Permits are not required for the shipment of specimens which 1) were acquired by the shipper prior to the listing of the species;[62] 2) are personal or household effects;[63] 3) have been bred in captivity or are artificially propagated plants;[64] 4) are noncommercial loans or exchanges between scientific institutions;[65] or 5) are for traveling circuses and exhibitions.[66]

CITES also allows member countries to exempt themselves from the permit requirements for a particular species by taking a "reservation."[67] A reservation must designate the species it covers and may be taken either at the time the member country joins the convention or within 90 days of any amendment to the appendices.[68] A party which reserves a species is treated as a nonparty with respect to that species.[69] For example, Japan has taken a reservation on Green Hawksbill and Olive Ridley turtles, which are listed in Appendix I. The Japanese use large quantities of the turtle leather and shells for such popular products as bekko, handbags, and luggage.[70]

Article VII(4) of CITES provides an additional exemption for animals "bred in captivity" for commercial purposes. Specific criteria must be satisfied before a species is considered to be "bred in captivity."[71] The member country must establish the breeding stock in a manner not detrimental to the survival of the species in the wild.[72] The stock must be managed in a manner "capable of reliably producing second-generation offspring in a controlled environment"[73] and in a manner that will allow the member country to maintain the stock indefinitely.

Similarly, the convention treats "ranching" of Appendix I spe-

62. *Id.* art. VII(2).
63. *Id.* art. VII(3).
64. *Id.* art. VII(4), (5).
65. *Id.* art. VII(6).
66. *Id.* art. VII(7).
67. *Id.* art. XXIII. For a discussion of some of the difficulties with the CITES reservation provision, see Comment, *Reservations Regarding the Reservation Clause*, 14 CORNELL INT'L L. J. 429, 430 (1981).
68. FOURTH CONFERENCE PROCEEDINGS, *supra* note 54.
69. *Id.*
70. Christian Sci. Monitor, June 30, 1987, at 9. Because of Japan's reservation and the parties' continuing trade without reservations, CITES has been noticeably ineffective in regulating the trade in sea turtle products. *See* M. WEBER, E. ROET, P. ESCHERICH, R. MCMANUS, J. TEEPLE-HEWES, SEA TURTLES IN TRADE, AN EVALUATION (1983).
71. The criteria were adopted at the San Jose Conference of March 1979. SECOND CONFERENCE PROCEEDINGS, *supra* note 55.
72. *Id.*
73. CITES, *supra* note 2, art. VIII(4)(b)(iii).

cies as a special exemption.[74] Ranching operations are not closed cycle like captive breeding. Rather, ranching involves the controlled rearing of wildlife from eggs or young taken from the wild.[75] The status of ranching is the subject of heated debate among CITES member countries.

D. Philosophical Basis of CITES

Few would argue that we should allow a species to become extinct without carefully considering the benefits and detriments to society. Many, perhaps most of us, have a strong intuitive belief that the potential loss of an entire species outweighs any potential economic consideration. But what are the justifications for these beliefs? Does society have concrete reasons for preventing the extinction of a species?

There are two great schools of thought on how to define and measure the value of natural objects. The first, a homocentric approach, views animals and other natural objects as possessing only instrumental value to human beings.[76] This view defines the value of wildlife solely in terms of its utility to the human species.[77] Accordingly, it affords no intrinsic value to nonhuman species. The second great school of thought is the intrinsic value approach.[78] This view maintains that all natural objects have an inherent and intrinsic value that humans should respect.[79] The intrinsic value of a species is not derived from any human concept of utility, but is independent of any use or function they may have to other species—they are valuable in and of themselves.[80]

The homocentric school of thought dominates the debate over the value of natural objects in the United States, despite a vocal opposition.[81] It is the foundation underlying the approach to the environment that has been adopted by most modern economists. This approach has two immediate economic implications: first, animals are

74. CITES, PROCEEDINGS OF THE THIRD MEETING OF THE CONFERENCE OF THE PARTIES 60 (1981) [hereinafter THIRD CONFERENCE PROCEEDINGS].

75. *Id.*

76. *See generally* Randall, *Human Preferences, Economics, and the Preservation of Species*, in THE PRESERVATION OF SPECIES (B. Norton ed. 1986).

77. Callicott, *On the Intrinsic Value of Nonhuman Species*, in THE PRESERVATION OF SPECIES 139 (B. Norton ed. 1986).

78. *Id.* at 139-40.

79. *See id.*

80. *Id.* at 140.

81. *Id.*

instruments for human satisfaction; second, animals are a scarce resource.[82] Thus, under the homocentric approach, the preservation of species is but one part of the larger problem of efficiently allocating scarce resources.

A popular assumption among free market economists is that the most efficient allocation of resources is through the private sector.[83] What conservationists view as environmental devastation, some economists consider maximization of wealth. Economists focus on the satisfaction of human wants in a never ending struggle to attain the good life. To them, wildlife is merely a resource to be exploited, and the market is the most efficient means of exploitation. Under this view, the only real problem is scarcity of resources. For example, in a simple homocentric economic model, elephants serve only two functions: they are a supplier of ivory and they attract tourists. If the sale of ivory generates more revenue than tourism, then economists would argue that elephants should only be used for trade in ivory.

Most economists would concede that the free market allocation of resources breaks down when faced with environmental issues such as the preservation of wildlife or the maintenance of air quality. When this happens, some sort of governmental regulation is necessary.[84] Some economists advocate "welfare economics"—a regulatory structure which mimics the market by assigning a value to "goods" and utilizing a cost-benefit analysis to determine the proper allocation of such goods.[85] Although the term seems to imply public assistance programs for the poor, welfare economics actually promotes the general welfare of all members of society by ensuring that environmental resources are not severely overused or misused. Using

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82. *See id.* at 140, 162.

83. *The Environmental Decade: Hearings on H.R. 44-315 Before a Subcomm. of the House Comm. on Government Operations,* 91st Cong., 2d Sess. 187, 192 (1970) (statement of Dr. Allén V. Kneese, Director, Quality of the Environment Program, Resources for the Future).

84. In testimony before a congressional committee in 1970, Dr. Allen Kneese, a respected economist, stated:

> Our usual mechanism for limiting the use of resources and leading them into their highest productivity employments is the prices which are established in markets through exchanges between buyers and sellers. For common property resources this mechanism does not function, and they must become the focus for collective or public management, unless they are to be severely overused and misused.

Id.

85. The literature in this area is vast. For a short overview, see David & Lin, *On Measuring the Economic Value of Wildlife*, in VALUING WILDLIFE, ECONOMIC AND SOCIAL PERSPECTIVES (D. Decker & G. Goff eds. 1987).

this approach, economists determine the monetary value of the goods to be regulated to the individuals who use them. The gains by members of society who are made better off from use of the goods would then be measured against the detriment to those who are made worse off by the use of the goods.

Assigning monetary values to wildlife is a difficult, if not impossible, methodological task. Most economic studies of wildlife have focused on consumptive-use values, such as those generated by hunting.[86] Consumptive-use values form a major category of wildlife benefits, and the members of society receiving these values are easily identified. However, there also exist nonconsumptive-use values which must be measured. These are the values people attach to wildlife for recreational purposes or for the simple pleasure of knowing that the species continues to exist. One method of calculating nonconsumptive-use values is by survey questionnaires. Respondents are asked to place a monetary value on the species in question. However, the speculative nature of such methods is obvious.

Society objects to using a cost-benefit approach for justifying its endangered species policy because of the impossibility of placing a value on saving a species from extinction. The value of a species to future generations in monetary terms cannot be measured. Because the present generation cannot predict the direction of cultural evolution and scientific progress, it cannot accurately evaluate the future utility of a given species.

Thus, economics cannot explain why an Indonesian fisherman should not catch sea turtles and sell them to Japan, or why governments should prohibit elephant poaching. As a result, many conservationists, seeking arguments for preserving species, have adopted a philosophy of animal rights.[87] Arguably, it may be inappropriate to

86. *See* T. REGAN & P. SINGER, ANIMAL RIGHTS AND HUMAN OBLIGATION 19 (1976); *see also* Randall, *supra* note 76, at 84, 87-88.

87. *See generally* T. REGAN & P. SINGER, *supra* note 86, at 19. Both Singer and Regan argue for a new ethical status of animals by applying the principle of equality, to include nonhuman as well as human animal species. This view should not be confused with positions taken by environmentalists such as Aldo Leopold. Leopold's appreciation of wildlife was set in the context of ecological balance, as opposed to valuing animals as important in themselves. While he argued that each species was valuable, the value was grounded in its role within the ecology. In his famous book, *Sand County Almanac*, Leopold praised hunting. Proponents of animal rights feel that Leopold's theory lacks a solid ontological foundation. At least one commentator has attempted to address this problem by arguing that animal rights are a logical progression from human rights, as both are rooted in an evolving concept of natural law. Goodkin, *The Evolution of Animal Rights*, 18 COLUM. HUM. RTS. L. REV. 259 (1987). This leads to an ironic paradox of prohibiting what nature once dictated—hunting. Another inter-

apply a rights analysis to an entire species because rights are held by individuals, not groups. As one noted critic, Joel Feinberg, observed: "A whole collection, as such, cannot have beliefs, expectations, wants or desires. . . . Individual elephants can have interests, but the species elephant cannot."[88] Additionally, by taking animal rights to its logical conclusion, the relationship between predators and prey becomes problematic. At the heart of the animal rights movement, then, may be a basic repugnance for nature in its wild state.

The novel idea—that perhaps man is not the measure of all things in nature and the hierarchy we have spent thousands of years establishing is dangerous to other species and to ourselves—is extremely powerful and fraught with dark implications. Many environmental researchers and animal rights advocates believe there is an urgent need for a biocentric or "deep ecology" approach to nature rather than the "shallow ecology" of conventional conservation.[89] Deep ecologists have an appreciation for the predator/prey food chains and accept the inevitability of life sacrificing other life to ensure its survival, a view not shared by animal liberationists. Deep ecologists prefer a *holistic* approach to nature, rather than the *atomistic* view held by animal rights advocates. Further, they value the ecological system as a whole, believing that the whole carries more weight than any of its component parts.[90]

CITES contains neither animal rights nor deep ecology philosophy. It is both a conservation and trade instrument. Although its primary goal is to preserve endangered species, its secondary goal is to allow a sustainable level of exploitation of those species.

In a compelling essay concerning our duties to nature, Professor Donald Regan presented a hypothetical situation to help determine

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esting approach was Andree Collard's synthesis of feminist theory with animal rights contained in a critique of patriarchal exploitation. A. COLLARD & J. CONTRUCCI, RAPE OF THE WILD: MAN'S VIOLENCE AGAINST ANIMALS AND THE EARTH (1989).

88. Feinberg, *The Rights of Animals and Unborn Generations*, in PHILOSOPHY AND ENVIRONMENTAL CRISIS (W. Blackstone ed. 1974).

89. J. CALLICOTT, IN DEFENSE OF THE LAND ETHIC: ESSAYS IN ENVIRONMENTAL PHILOSOPHY (1988); R. NASH, THE RIGHTS OF NATURE (1987); *see also* W. BLACKSTONE, PHILOSOPHY AND ENVIRONMENTAL CRISIS; Callicott, *supra* note 77, at 148-51.

90. The most cogent philosophical analysis of deep ecology is found in R. NASH, *supra* note 89; *see also* J. CALLICOTT, *supra* note 89. For the differences between animal rights and deep ecology, see Johnson, *Animal Liberation versus the Land Ethic*, 3 ENVTL. ETHICS 3 (1981). For an interesting merger of feminist theory with deep ecology, see A. COLLARD & J. CONTRUCCI, *supra* note 87.

what value we give to nature.[91] He suggests that part of the value of natural objects is the pleasure humans receive from knowing that a natural object exists, regardless of whether the object has a concrete utilitarian function.[92] This is a homocentric value since it derives from human use, however abstract. But Professor Regan then asks, if the last person on earth could push a button to destroy the Grand Canyon as she dies, would it be wrong for her to push the button?[93] He concludes that even though the Grand Canyon would no longer serve a homocentric function, it would be wrong to destroy it.[94] Regan's answer is correct, but not for utilitarian reasons. An overwhelming majority of people would agree that it would be wrong for a natural object of beauty to be destroyed simply because consciousness no longer exists to enjoy it. Such a conclusion would be reached, not through rational scrutiny based on animal rights or welfare economics, but through a deep felt intuition.

The theoretical foundation of CITES is classically political. The convention attempts to balance the vague intuitive notion that the preservation of species is good, against commercial demands for its exploitation. The stress between these competing interests is the core of the structural weakness of the convention. The three studies which follow illustrate how the commercial benefit of exploiting endangered species is in constant competition with the countervailing and amorphous value we place on their preservation.

III. CASE STUDIES

The participating nations who drafted CITES in 1973 were chiefly concerned with blocking unscrupulous trade in wildlife and its derivative products. Looming behind those concerns was the vague image of poachers and unsavory middlemen with no respect or appreciation for the beauty of nature. Thus, it is ironic that one of the biggest controversies over CITES to date dealt not with unscrupulous trade, but instead involved importation of an endangered species by a respectable American zoo.

For the past thirty years, American zoos have been at the fore-

91. Regan, *Duties of Preservation,* in THE PRESERVATION OF SPECIES 205 (B. Norton ed. 1986).

92. *Id.*

93. *Id.* Of course, the use of the "last person" argument does not put any special value on wildlife since it can be used for artificial objects, such as artwork. It is not so much an argument for intrinsic value, as for the marvelously irrational way humans value things.

94. *See* Regan, *supra* note 91, at 206.

front of efforts to save endangered species. Many zoos have established reputations as successful breeders of species whose habitats are being destroyed. For example, the Cincinnati Zoo has been remarkably successful in breeding lowland gorillas in captivity. Similarly, the San Diego Zoo has made heroic efforts to save the California Condor. These zoos have become stationary arks amidst a flood of ecological disaster.

A. The Giant Panda

Despite these efforts, some American zoos have become embroiled in a controversy over CITES. One dispute involves a short-term loan of rare giant pandas by the People's Republic of China to American zoos. At issue is whether the very survival of the giant panda is endangered by removing two of the few remaining pandas capable of breeding in captivity from their familiar habitat. The issue came to a head when new information emerged suggesting that giant pandas are in far worse danger than previously realized.

1. The Plight of the Panda

Fewer than one thousand wild giant pandas exist in China.[95] They live in small scattered groups that are highly vulnerable to extinction from food shortages, disease, poaching, and an insufficient breeding-age population. However, the primary problem facing pandas is the loss of habitat due to agricultural expansion. Because pandas have a specialized diet of bamboo shoots and leaves, they are vulnerable to the periodic "die-offs" of various bamboo species which flower and then die.[96] Logging and agricultural expansion eliminates travel corridors and prevents the animals from finding alternative sources of bamboo. During one such die-off in the Qionglia Moun-

95. Johnson, Schaller & Hu Jinchu, *Responses of Giant Pandas to a Bamboo Die-off*, 4 NAT'L GEOGRAPHIC RES. 161, 164 (1988).

96. Although pandas may eat various plants, as well as meat, more than 99% of their food consists of bamboo stems, branches, and leaves. *Id.* The panda's feeding habits are peculiar. It has the short digestive track of a carnivore, but the diet of a herbivore. Thus, it requires vast quantities of bamboo because it cannot digest the plant efficiently. Pandas devote 96% of their time to feeding and resting. *Id.* The species has a specialized digit on their forepaw to strip leaves off the bamboo shoots. *See generally* DAVIS, THE GIANT PANDA, A MORPHOLOGICAL STUDY OF EVOLUTIONARY MECHANISMS (1964).

Bamboo usually reproduces by producing shoots from rhizomes, but periodically an entire species will flower and die. If an alternative bamboo species is unavailable within the panda's home range, the panda must either expand its range or emigrate. Johnson, *supra* note 95, at 161.

tains between 1983 and 1987, Chinese wildlife authorities found the bodies of 62 pandas that died of starvation.[97]

Poaching presents another major threat to the survival of giant pandas. In February 1988, for example, Chinese authorities recovered 146 giant panda pelts, representing roughly fifteen percent of the estimated pandas alive in the wild.[98] Panda pelts may be worth as much as $15,000 on the Japanese black market.[99]

The panda's slow breeding cycle contributes to the problem of population regeneration. They require six or more years to sexually mature and generally breed only during a short period in the spring.[100] In addition, they require two years between successful births and seldom have more than one cub.[101] With a five year prime breeding span, the average female panda can only give birth to two or three cubs in its lifetime.[102] The slow breeding rate of pandas would not normally be a problem, but for the loss of habitat, the specialized diet, and poaching. These factors, combined with the fact that there are fewer than one thousand pandas alive in the world, make the species one of the most endangered. Thus, a truly viable population may no longer exist in the wild today.

In addition to the wild pandas, approximately one hundred are living in captivity in China and thirteen are permanently located in zoos of other nations.[103] However, pandas have proven difficult to breed in captivity. For example, the United States National Zoo in Washington, D.C. has had difficulty in successfully breeding the two pandas which it received as gifts in 1972.[104] To date, five cubs have either been stillborn or died shortly after birth.[105]

2. Exhibition Loans

Pandas were occasionally used as diplomatic tokens, such as the gift of two pandas to the National Zoo when relations between the People's Republic of China and the United States thawed in the

97. Johnson, *supra* note 95, at 176.
98. Boffey, *Traditional Allies Battle Over Pandas*, N.Y. Times, May 31, 1988, at 1, col. 3.
99. TIME, May 23, 1988, at 33 (Int'l ed.).
100. *Id.*
101. *Id.*
102. SCHALLER, HU JINCHU, PAN WENSHI, ZHU JING, THE GIANT PANDAS OF WOLONG 178-206 (1985).
103. *Id.* at 265-66 (app. B).
104. Wash. Post, May 18, 1988, § A, at 3.
105. Wash. Post, Sept. 6, 1989, § A, at 35.

1970s.[106] However, in 1985, Chinese authorities decided to discontinue the presentation of pandas as permanent gifts.[107] Current Chinese policy still allows for short-term loans of pandas for exhibition. Such loans typically involve the exhibition of two pandas for 100 to 200 days and have become very popular with American zoos. In 1988, pandas were exhibited at the Toledo Zoo and plans were made for subsequent exhibitions in Atlanta, Georgia; Columbus, Ohio; Omaha, Nebraska; Portland, Oregon; at the Michigan State Fair; and Disney World in Orlando, Florida.[108]

China's willingness to exhibit the preciously few pandas despite the potential danger to the species is partly economic. Deng Xiaoping's economic reforms encourage government departments to supplement their funding by creating profit making units. American zoos typically pay China between $300,000 and $500,000 to exhibit a single pair of pandas.[109] In addition, Chinese officials usually receive a free trip to the United States to accompany the pandas. The host zoo generally pays for three Chinese animal handlers to stay with the pandas during the exhibit, and for five Chinese officials to attend the opening and closing ceremonies of the exhibit.[110] While the host zoos invariably stress the educational and conservation purposes of the exhibit, their decision to exhibit the endangered species is obviously affected by economic considerations. Pandas draw great public attention and significantly boost zoo attendance and revenues.[111]

Critics of the short-term loans contend that these exhibits hamper captive breeding programs by disrupting the natural breeding cycle of the animals. Evidence strongly suggests that mating between pandas requires a concerted effort to find compatible mates and acclimate them to each other.[112] The cycle of international shipment and repeated isolation at various zoos disrupts the breeding environment. In 1987, concerns over the short-term loans became acute when a female panda on loan at the Bronx Zoo ovulated. As a result, in March 1988, the American Association of Zoological Parks and Aquariums

106. Boffey, *supra* note 98.

107. TIME, *supra* note 99.

108. Boffey, *supra* note 98.

109. Wash. Post, May 18, 1988, § A, at 3.

110. TIME, *supra* note 99.

111. For example, the panda exhibit at the San Diego Zoo resulted in a 35% increase in attendance and a revenue gain of more than five million dollars. Boffey, *supra* note 98.

112. Adult pandas are essentially solitary, even antisocial animals. In captivity, panda couples have rarely been compatible. As a result, few of the females have conceived naturally when physiologically able to do so. SCHALLER, *supra* note 102.

("AAZPA") issued guidelines urging that zoos "only accept animals for short-term loans which are adult specimens physiologically incapable of reproduction."[113]

On May 23, 1988, the CITES Secretariat issued a notification to member countries regarding short-term loans of pandas.[114] The notification stated that "[e]xhibition loans [of pandas] may detract from the breeding potential of the captive-breeding efforts in China and may, therefore, be detrimental to the survival of the species."[115] The notification further recommended that such loans be limited "to the individual specimens which are either too young or too old to breed, or are for some other reason unsuitable for inclusion in the captive-breeding programme."[116]

3. The Toledo Zoo's "Pandamania"

Litigation resulted from the United States Secretary of the Interior's approval of the importation of two breeding-age pandas for exhibition at the Toledo Zoo for a loan period of 100 to 200 days starting in May 1988.[117] The World Wildlife Fund, a conservation group with 475,000 members in the United States, and the AAZPA opposed the granting of the permit and filed suit to enjoin the loan.[118] The litigants argued that the permit violated both CITES and the ESA.[119]

The Toledo Zoo panda loan was in many ways typical of most panda exchanges. The Toledo Zoo was to receive two pandas for 100 days to celebrate the city's 150th anniversary.[120] During the exhibition, the Toledo Zoo agreed not to attempt any scientific observation or breeding efforts. In return, the People's Republic of China was to receive a donation of equipment and vehicles for the research facilities at the Wolong Panda Reserve.[121] The Toledo Zoo viewed the ex-

113. *Position Statement on Giant Pandas, Adopted as AAZPA Mandatory Standards*, AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS (1988).

114. CITES, NOTIFICATION TO THE PARTIES ON GIANT PANDA EXHIBITION LOANS, May 23, 1988 [hereinafter NOTIFICATION].

115. *Id.*

116. *Id.*

117. Wash. Post, May 18, 1988, § A, at 3.

118. World Wildlife Fund v. Hodel, slip op. at 1, (No. 88-1276) (D.D.C. 1988).

119. *Id.*

120. *Id.*

121. This donation was to be equivalent to $300,000. Agreement For Loan of Giant Pandas Between China Wildlife Conservation Association and Toledo Zoological Society, Exhibit "C" in Plaintiffs' Complaint, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988).

change as a means to increase revenue through increased attendance and the sale of "pandamania" souvenirs.[122] The zoo planned to use the profits from the exhibition to finance needed capital improvements for the zoo's primate display.[123]

Unfortunately for the Toledo Zoo, the entire climate for panda exhibitions had changed since the Bronx Zoo exhibit the previous year. Conservation groups strongly opposed such loans, the AAZPA's new policy disfavored such loans, and the Wildlife Service refused to grant any import permits until the People's Republic of China could demonstrate how such loans would help propagate the species. The zoo, acting in good faith, had asked for nonbreeding-age pandas and expended considerable funds in preparation for them.[124] Rather than cancel their plans, the zoo requested Delbert Latta, a senior Republican Congressman from Ohio, to intercede on its behalf with the Wildlife Service.[125] The zoo also sought assistance from the Chinese government.[126] On May 6, 1988, the Wildlife Service issued a permit authorizing importation of the pandas for the purposes set forth in the Toledo Zoo application.[127] Thus, it came as quite a surprise when the Chinese government provided two eight-year-old, prime breeding-age pandas, one of which was a proven breeder in captivity.[128]

In 1983, when the People's Republic of China became a member of CITES, the giant panda was listed in Appendix III.[129] In 1984, the

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122. Toledo Blade, May 24, 1988, at 7.

123. The zoo denied that increased income derived from the panda exhibit would benefit the zoo, explaining that the extra revenue would be used to cover the panda exhibition's expenses. *Id.* However, in a planning meeting report, the zoo's intent was clearly illustrated:

> The concept for these projects is to assign to the temporary Panda Exhibit all possible expenses that are necessary for the permanent Primate Exhibit. Additionally, all efforts have and will be made to minimize cost for the items only usable for the Panda. The advantages of this approach is [sic] to maximize the facility benefits for the Panda Exhibit and minimize total costs.

See Affidavit of E.U. Curtis Bohlen, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988).

124. *Hodel*, slip op. at 7.

125. *See* Boffey, *supra* note 98.

126. Secretary of Interior Hodel was quick to give credit to Representative Latta for intervening on behalf of the Toledo Zoo. Toledo Blade, May 27, 1988, at 17.

127. *Hodel*, slip op. at 7.

128. There is a dispute as to whether the male panda, Le Le, had successfully fathered a cub. The World Wildlife Fund alleged that Le Le had successfully bred, and may be the only confirmed male breeder at the Wolong Reserve. *See* Affidavit of Christopher Elliott, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988). However, Chinese officials have aggressively denied the allegation. Toledo Blade, May 26, 1988, at 6.

129. *See* NOTIFICATION, *supra* note 114.

convention transferred the giant panda to Appendix I.[130] The Wildlife Service listed the panda as an endangered species under the ESA on January 23, 1984.[131] Therefore, a properly issued import permit must meet the requirements of both CITES and the ESA.

Article III of the convention states that a signatory party may grant an import permit for an Appendix I species only when: 1) the Scientific Authority of the importing country has determined that the import will be for purposes which are not detrimental to the survival of the species involved; and 2) the Management Authority of the importing country is satisfied that the importing facility will not use the specimen primarily for commercial purposes.[132]

In issuing the import permit to the Toledo Zoo, the Wildlife Service found that the importation of two breeding-age pandas would not threaten the species' survival.[133] The service determined that male pandas could be safely removed from their natural habitat because the male panda's semen could be secured and artificially stored. As to the female, the Scientific Authority noted, "[o]ne might conclude that the Chinese consider this animal as non-reproductive since that is the type of animal that the applicant requested," and that she might "be past the breeding period for this year."[134]

Both of these conclusions are subject to harsh criticism. With respect to the decision on the male panda, captive breeding efforts with pandas have had a significantly higher success rate with natural mating than artificial insemination.[135] Artificial insemination in endangered species is usually a tool of last resort, and used only when natural mating is no longer possible. The Wildlife Service's conclusion is particularly troubling given that the only panda at the Wolong Reserve to have fathered an offspring in captivity was the male sent to

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130. 50 C.F.R. § 23.23 (1989).

131. 49 Fed. Reg. 2779 (1984) (codified at 50 C.F.R. § 17.11(h)).

132. CITES, *supra* note 2, art. III(3).

> An import permit may only be granted when the following conditions have been met:
>
> (a) a Scientific Authority of the State of Import has advised that the import will be for purposes which are not detrimental to the survival of the species involved.
>
> (b) a Management Authority of the State of Import is satisfied that the specimen is not to be used for primarily commercial purposes.

Id.

133. Boffey, *supra* note 98.

134. Plaintiffs' Memorandum in Support of Motion for Preliminary Injunction at 19, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988).

135. Between 1978 and 1982, approximately 40 females were artificially inseminated with only 11 subsequent births and 7 surviving cubs. SCHALLER, *supra* note 102, at 179.

the Toledo Zoo.[136] The removal of the only proven breeder from a program for the propagation of the species clearly has an adverse effect on the success of that program.

The conclusion as to the female is even more questionable since it was based on mere speculation that the female "*may* be past the breeding period for th[e] year."[137] Pandas reproduce in seasonal cycles, with conceptions usually occurring between mid-March and mid-May.[138] However, there have been reports of pandas having periods of estrus occurring as late as June.[139] Among females which fail to conceive in the spring, estrus may occur as late as September or October.[140] The Scientific Authority's report also ignored the adverse effects that international travel and temporary relocation may have on a species whose reproductive rate is particularly slow.

Contrary to the conclusions of the United States Scientific Authority, it is clear that the short-term exhibition at the Toledo Zoo had a negative impact on the propagation of the panda population. The only possible justification for the Toledo loan was the economic benefit to the Wolong Reserve. Arguably, the $300,000 worth of equipment provided for China's conservation efforts at the reserve from the Toledo loan outweighed the detriment of removing the two animals from their breeding environment. There is little doubt that the People's Republic of China needs assistance in its conservation efforts; however, the zoo's assistance to the Wolong Reserve was of questionable value. The World Wildlife Fund noted in its comment on the Toledo Zoo's application that much of the zoo's assistance was duplicative of work already in progress by the Fund and other conservation organizations.[141]

For an import permit to be issued for an Appendix I species, it must be shown "that the specimen is not to be used for primarily

136. Affidavit of Christopher Elliott at 4, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988).

137. Brief for World Wildlife Fund and American Association of Zoological Parks and Aquariums at 19, World Wildlife Fund v. Hodel, (No. 88-1276) (D.D.C. 1988).

138. SCHALLER, *supra* note 102, at 178.

139. *Id.* at 179.

140. *Id.* at 178-79.

141. Comment by World Wildlife Fund on Permit Application PRT 726229 at 6, April 29, 1988 [hereinafter Permit Comment]. For example, the zoo promised to establish a joint team with the Chinese to prepare a comprehensive ecological study of the Tanjiahe Reserve. However, such a study was already in process by a joint Chinese and World Wildlife Fund team. *Id.*

commercial purposes."[142] Under the convention, "an activity can generally be described as 'commercial' if its purpose is to obtain economic benefit, including profit (whether in cash or in kind) and is directed toward resale, exchange, provision of a service or other forms of economic use or benefit."[143] In addition, the convention defines "commercial purposes"

> as broadly as possible so that any transaction which is not wholly "non-commercial" will be regarded as "commercial." In transposing this principle to the term "primarily commercial purposes," it is agreed that all uses whose non-commercial aspects do not clearly predominate shall be considered to be primarily commercial in nature with the result that the importation of Appendix I specimens should not be permitted.[144]

The stated goal of the Toledo panda exhibition was to promote education about wildlife. The not-for-profit status of the Toledo Zoo further supports the argument against treating the exhibit as a commercial enterprise. Nevertheless, there are unmistakable commercial elements present in the Toledo Zoo loan agreement. First, the panda loan was a commercial exchange for goods valued at $300,000.[145] Second, the zoo expected the increased revenues from the exhibition to pay for $2,000,000 worth of capital improvements to their primate exhibit.[146] Third, the zoo hoped the panda exhibit would substantially increase its membership.[147] Finally, the zoo engaged in a surprising degree of hucksterism[148] in its efforts to promote the panda. Among other things, the zoo paid a public relations firm $350,000 to advertise the pandas, set up cooperative deals with soft drink manufacturers and grocery store chains, and sent out mass mailings in an attempt to hype "pandamania."[149] The zoo hoped to produce gross revenues in excess of $3,000,000 through the exhibition—over ten

142. CITES, *supra* note 2, art. III(3)(c), (5)(c).

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

144. CITES, PROCEEDINGS OF THE FIFTH MEETING OF THE CONFERENCE OF THE PARTIES res. 5.10 (1985) [hereinafter FIFTH CONFERENCE PROCEEDINGS].

145. Wash. Post, May 18, 1988, § A, at 3, col. 2.

146. Permit Comment, *supra* note 141.

147. N.Y. Times, May 3, 1989, § C, at 1, col. 4.

148. "Hucksterism" is defined as promotional activity which borders on zealous misrepresentation. WEBSTER'S NEW COLLEGIATE DICTIONARY 551 (1979).

149. The zoo's campaign included saturating Northwest Ohio with billboards, commercial tie-ins with Pepsi—"Pandas and Pepsi! Save on a Great Combination"—and other businesses. It became almost impossible to drive in Toledo without seeing a giant panda staring benignly out at an urban landscape.

times the amount sent to China for conservation purposes.[150] Balancing the purported educational objectives of the exhibit against these commercial and economic benefits, it is clear that the commercial nature of the loan predominates.

In addition to the CITES' limitations, the ESA further restricts the issuance of permits for importation of endangered species. Under the ESA, import permits may only be issued for scientific purposes or to enhance the propagation or survival of the species.[151] The Toledo Zoo's panda exhibit could not have been for scientific purposes since the zoo's agreement with the People's Republic of China forbade scientific study or breeding.[152] Furthermore, the exhibit did not enhance the propagation or survival of the species.[153]

The United States Department of the Interior also has regulations which distinguish between special exhibitions of endangered species and regular zoological displays.[154] These regulations allow importation for zoological displays of species that are merely "threatened" but not listed as an endangered species.[155] However, if the Department of the Interior meant to permit importation of endangered species for "zoological exhibition," it would have clearly stated this intent in the regulation.

The World Wildlife Fund's lawsuit to prevent the panda exhibit at the Toledo Zoo was unsuccessful.[156] While they were successful in stopping some of the more commercial aspects of the Toledo exhibition, the pandas were ultimately brought to the zoo.[157] However, in a broader sense, the suit was extraordinarily successful. The negative publicity caused both the Wildlife Service and the People's Republic of China to revise their policies on panda loans.[158] Additionally, zoos

150. Wash. Post, May 18, 1988, § A, at 3, col. 2.

151. 16 U.S.C. §§ 1538(a)(1)(A), 1539(a)(1)(A).

152. TIME, *supra* note 99.

153. Boffey, *supra* note 98.

154. 50 C.F.R. § 17.32 (1989).

155. *Compare* 50 C.F.R. § 17.22 *with* 50 C.F.R. § 17.32.

156. U.P.I., June 20, 1988.

157. United States District Court Judge Norma Johnson granted a preliminary injunction barring the Toledo Zoo from charging visitors a special two dollar fee to view the giant panda exhibit. *Id.*

158. On September 16, 1988, China announced that it would no longer loan giant pandas or golden monkeys, another endangered species, to the United States. N.Y. Times, Sept. 17, 1988, § 1, at 28, col. 1. The action followed a June 1988 decision by the Wildlife Service to deny panda import applications from zoos or other institutions until it reviewed its panda loan policies and guidelines. 53 Fed. Reg. 23,847 (1988).

In September 1989, the Wildlife Service announced its new policy. The policy incorpo-

around the world were put on notice that future loans of this type would be challenged.

B. The African Elephant

In 1986, only a single elephant was left alive in Burundi,[159] yet the country registered over 100 tons of ivory which represented tusks from 8,148 elephants.[160] The central African nation of Burundi is a tiny, densely populated country, which is periodically torn by violent tribal struggles between the predominantly pastoral Tutsi and the largely agrarian Hutu population.[161] For most of the 1980s, hunters smuggled ivory from elephants slaughtered illegally in Kenya, Tanzania, and Uganda into Burundi and laundered the ivory with false certificates of origin.[162] The illegal ivory was then shipped to European, Asian, and American markets. The smuggling of poached ivory through Burundi was a small part of an immense world trade supplying a voracious market for ivory jewelry and carvings.[163] The control and regulation of this trade has been the biggest challenge in CITES' history.

1. The Poaching Problem

Ivory is not a mineral or precious stone; it can only be obtained from the tusks of adult elephants.[164] For thousands of years,

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rated all of the World Wildlife Fund's objections to temporary panda loans. It limited loans to nonbreeding-age pandas even during the nonbreeding season unless the loans clearly supported breeding opportunities. As a result, loans would be limited to females at least two years of age, but not older than four; males at least two, but not older than five; and adults of either sex eighteen years or older.

In addition, the service attempted to define the noncommercial requirement of such loans. The proposed guidelines would require that the sponsor organization demonstrate that its share of funds would further its stated nonprofit objectives. These objectives would contribute primarily to the conservation of giant pandas and secondarily to other endangered species or natural resources.

The Toledo loan, evaluated under these guidelines, would fail because the pandas were both of prime breeding age. On the other hand, the proposed guidelines accept the commercialization of panda loans as long as they benefit the objectives of the nonprofit organization. In effect, this was what the Toledo Zoo intended to do with the increased funds from the panda exhibit.

159. *Saving The Elephant*, The Economist, July 1, 1989, at 15.

160. 53 Fed. Reg. 15,468 (1989).

161. *See generally A Crisis in East Africa: New Census Shows that Poaching has Taken Heavy Toll*, L.A. Times, Apr. 4, 1988, at 5, col. 1 [hereinafter *Crisis in East Africa*].

162. *See id.*; N.Y. Times, May 27, 1986, § C, at 4, col. 5.

163. *See generally* D. FAVRE, *supra* note 14, at 136.

164. *See* Weisburd, *African Elephants: A Dying Way of Life*, Sci. News, May 21, 1988, at 333.

craftsmen have used ivory for carving figurines and making jewelry. Ivory from African elephants is generally preferred over that of Asian elephants because the African tusks are more dense and provide a higher quality carving material.[165] Trade in African ivory dates back to Roman times. However, systematic ivory exploitation did not begin until the seventeenth century when the Portuguese colonized West Africa. Exploitation in the nineteenth century was so severe that it brought the elephant population in East and Central Africa to the edge of extinction. In 1897, game laws were introduced which restricted elephant hunting and allowed surviving elephants to reestablish their prior population levels.[166] Unfortunately, the elephant population in Africa began to decline again in the 1970s.[167] Evidence indicates that an explosion in poaching was the primary cause of the population decline.[168] Today, the African elephant is again a severely endangered species.

For some years, biologists and wildlife experts have noted local declines in the elephant populations of various national parks and protected areas.[169] Yet, it was not until 1987 that a demographic study showing elephant population trends in Africa became available.[170] Wildlife experts assembled the best available data on elephant populations in a United Nations Environmental Programme ("UNEP") report sponsored by the World Wildlife Fund and Elsa

165. The Asian elephant (*elephas maximus*) is also threatened with extinction and listed on Appendix I. Approximately 24,000 wild Asiatic elephants are scattered in forests and grasslands of India, Sri Lanka, Indochina, Malaysia, Indonesia, and South China. Although the Asiatic elephant faces habitat destruction and poaching, it does not seem to have suffered the population crash of the African elephant. This is partly due to the fact that the Asiatic elephant has value as a domesticated work animal. For thousands of years these elephants have been taken from the wild, trained, and put to work in logging, farming, construction, hunting, and warfare. In contrast, the African elephant has not been widely domesticated. *See generally* Schmidt, *The Fine Art of Elephant Breeding*, ANIMAL KINGDOM 45 (1989).

Another possible reason why poaching has not created a crisis for the Asiatic elephant is its common lack of tusks. In Africa, most elephants, both male and female have tusks. However, in Asia, perhaps due to the selective hunting for ivory over thousands of years, female elephants only rarely have tusks and males frequently have none.

166. Spinage, *A Review of Ivory Exploitation and Elephant Population Trends in Africa*, 11 E. AFR. WILDLIFE J. 281-89 (1973).

167. Fin. Times, June 23, 1990, § I, at 6.

168. N.Y. Times, May 12, 1989, § A, at 5, col. 1.

169. N.Y. Times, Jan. 7, 1990, § 6, at 28, col. 1.

170. The 1987 elephant census was conducted by elephant specialist Ian Douglas-Hamilton and funded by the European Economic Community and the World Wildlife Fund. *See Crisis in East Africa*, *supra* note 161.

Wild Animal Appeal.[171] The report presented estimates of elephant populations for Africa, country by country, using the geographical information provided by the UNEP.[172] The results exposed an alarming population decline over the last ten to fifteen years.[173] From an estimated continent-wide elephant population of 1,300,000 in 1979, there had been a decrease to between 600,000 and 800,000 by 1986.[174] The census further revealed a decrease of 87% or more in Kenya, Tanzania, and Uganda during the previous fifteen years.[175] In Sudan, Chad, the Central African Republic, and Zaire, poaching had virtually wiped out this magnificent animal.[176] Sudan, for example, exported 1,200 tons of ivory from 1979 to 1982, representing the deaths of 107,000 elephants or 80% of the estimated population.[177]

Researchers fear that the impact of poaching is far greater than the sheer decrease in the number of elephants. As Cynthia Moss has described in her popular book, *Elephant Memories*,[178] elephants have an intricate social hierarchy and structure. They live in family units consisting of adult females and their immature offspring ranging from newborns to calves up to about ten years old.[179] A matriarch, usually the oldest female, is the leader of each family unit.[180] Females reach sexual maturity at about eleven years of age, but are most productive after twenty-five years.

The destruction of the elephant population has followed a methodical pattern. Poachers, seeking the animals with the largest tusks, first hunt the males and the older matriarchs.[181] When the supply of older elephants is exhausted, the poachers hunt the medium aged ones, including prime breeding-age females.[182] Eventually, the populations are reduced to only young elephants with very small tusks. This regression has two significant effects. First, poachers

171. A summary of the report is available in Douglas-Hamilton, *African Elephants: Population Trends and Their Causes*, 21 ORYX 11 (1987).

172. *See Crisis in East Africa*, *supra* note 161.

173. *Id.*

174. *E.g.*, Lindsay, *Trading Elephants for Ivory*, NEW SCIENTIST, Nov. 6, 1986, at 48; N.Y. Times, Jan. 7, 1990, § 6, at 28, col. 1.

175. *See Crisis in East Africa*, *supra* note 161.

176. Caldwell, *Wildlife Trade Monitoring Unit*, 6 TRAFFIC BULL. 19-20 (1988).

177. *Crisis in East Africa*, *supra* note 161.

178. C. MOSS, ELEPHANT MEMORIES: THIRTEEN YEARS IN THE LIFE OF AN ELEPHANT FAMILY 295 (1988).

179. *Id.*

180. Weisburd, *supra* note 164, at 333.

181. C. MOSS, *supra* note 178.

182. *Id.*

must kill increasingly more elephants to supply the demand for ivory, since each individual elephant is supplying less. Second, the social structure of the herds is deprived of its leadership and prime breeding elephants.[183] Harassed by poachers, and having lost the collective experience of their mature members, the terrified, leaderless herds of young elephants inevitably experience a reduced reproduction rate.

There is little doubt that increased ivory poaching is the primary cause of the elephant population decrease. In the 1960s, most conservationists considered the chief threat to elephants to be habitat destruction due to agricultural expansion. Herds were so strong and numerous that Kenya instituted controlled culling programs. By 1980, however, researchers found more carcasses than live animals; invariably the tusks had been cut out of the dead animals. The reason for the slaughters was obvious, the price of ivory had risen to the point where poaching had become extremely profitable. In the late 1960s, the price of ivory was approximately $5 per kilogram.[184] By 1972, it reached $30 per kilogram; in 1978, $75 per kilogram; and in the mid-1980s, the price soared to over $100 per kilogram.[185] In constant dollars, the price of ivory had increased three-and-one-half times since the late 1960s.[186]

The contraband ivory supplied vigorous ivory carving markets in Africa and traditional carving centers such as Hong Kong and Japan.[187] Estimates show that Japan is the largest market for raw and finished ivory and consumes as much as 40% of the ivory originating in Africa.[188] Researchers estimate the world demand for ivory at 800 tons annually.[189] To meet this demand, approximately 70,000 elephants per year would have to be slaughtered.[190] If the current popu-

183. *Id.* For the social life of elephants, see ELTRINGHAM, ELEPHANTS 52-57 (1988). Reportedly, surveys in some parts of Africa have found no elephants older than 30. Weisburd, *supra* note 164.

184. L.A. Times, Apr. 4, 1988, at 5, col. 1 (1970 price of ivory was $7.44 per kilogram).

185. *Id.*

186. Douglas-Hamilton, *supra* note 171, at 19.

187. Fin. Times, June 23, 1990, § I, at 6.

188. Japan imported as much as 470 tons of ivory per year for use as family seals, chopsticks, and carvings. The ivory carving industry employed about 30,000 people. *Id.*

189. Caldwell, *Recent Developments in the Raw Ivory Trade of Hong Kong and Japan*, 6 TRAFFIC BULL. 16 (1984).

190. This assumes an average of 1.8 tusks per elephant to take into account one-tusked and broken-tusked elephants and assumes an average tusk weight of 13 pounds. Douglas-Hamilton, *supra* note 171, at 22. Another factor which should be considered is the death of calves who have lost their mothers and the lower survivability rate of a herd which has lost its most senior members.

lation estimates of 600,000 to 800,000 elephants left in the wild are correct, the population would decline by 9% to 11% per year due to ivory hunting alone. Since elephants only increase their numbers by 3% to 7% per year under ideal conditions,[191] the net annual loss to the species is critical.[192]

Along with the increasing price of ivory, the increased availability of automatic weapons has accelerated poaching.[193] Hunting elephants with bows and arrows or even elephant guns is a dangerous and difficult activity. This element of danger has worked to protect the animals from all but the famous "white hunter" safaris and the most skilled African hunters. However, the proliferation of automatic weapons has enabled a greater number of native hunters to supplement their income by poaching. Even a 12,000 pound elephant will fall prey to an AK 47 assault rifle.

2. CITES' Attempts to Save the Elephant

The African elephant has been listed on Appendix II of CITES since the first draft of the convention.[194] As a result, a CITES permit or certificate from the country of export or reexport was necessary for ivory to be traded among signatory countries.[195] Laundering operations and corrupt law enforcement in many African countries prevented this mechanism from effectively controlling the rapidly expanding ivory trade.[196]

In 1981, conscious of the increase in ivory trade and the failure of the permit process, the Third Conference of the Parties to CITES met in New Delhi and issued a resolution that recommended the parties adopt additional restrictions on trade in ivory.[197] The new approach required each tusk or piece of raw ivory to be marked using punch dies to indicate the country of origin, the year the hunter acquired the ivory, and the weight of the ivory in kilograms.[198] The convention encouraged the parties to accept only raw ivory which was clearly marked, and to import, export, or reexport ivory only when

191. A number of factors including food supply, density, and the age of the population affect the rate of reproduction. The 3% to 7% annual growth figure may be optimistic; it has only been documented in one protected park. Lindsay, *supra* note 174.

192. N.Y. Times, May 12, 1989, § A, at 5, col. 1.

193. Douglas-Hamilton, *supra* note 171, at 19.

194. D. FAVRE, *supra* note 14.

195. CITES, *supra* note 2, art. IV(2).

196. *See* Chicago Tribune, Oct. 14, 1989, at 14.

197. THIRD CONFERENCE PROCEEDINGS, *supra* note 74, at 61.

198. *Id.*

satisfied that the ivory was legally acquired in the designated country of origin. This last point was more advisory than practical considering the sophistication of the ivory smuggling and laundering operations.

Unfortunately, the new CITES system provided little improvement. The regulation of carved ivory depended completely upon the effectiveness of enforcement in countries where exporting and carving took place. In practice, hunters would illegally take the ivory from countries that had effective export controls like Kenya and Tanzania, and smuggle it into countries like Burundi where ivory was punched with the national markings of Burundi or Uganda. The ivory was then exported to Hong Kong for carving and finally reexported to Japan or the United States. At this point, it was clear to the CITES member countries that little progress could be made without stronger controls and enforcement throughout Africa.

At the Fifth Conference of the Parties to CITES held in 1985, the signatory countries attempted for the third time to improve regulation of the trade in ivory.[199] Substantial changes were made in an attempt to create a more centralized regulatory structure. The convention delegated to the CITES Secretariat the authority to form an Ivory Control Unit and to establish ivory quota procedures to regulate trade between CITES member and nonmember countries.[200] The 1986 quota of ivory permitted to be exported was deliberately set high at 90,000 tusks, taking into account stockpiled tusks and those confiscated from poachers.[201] The conference anticipated that the quotas would be reduced when the backlog of tusks was eliminated.[202]

This new system appeared to be more successful than the previous attempts to regulate ivory trade. The Ivory Control Unit established an objective watchdog, which had been noticeably absent in prior years. Export quotas for the African countries provided clear guidelines which the authorities could carefully monitor. By tracking the die-punched ivory, the authorities could quickly identify problem areas and apply political and economic pressure.[203]

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199. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 54-56.

200. *Id.* at 55.

201. N.Y. Times, May 27, 1986, § C, at 4, col. 5; *but see* The Economist, July 1, 1989, at 12 (the figure is estimated at 108,000 tusks).

202. N.Y. Times, May 27, 1986, § C, at 4, col. 5.

203. For example, on April 29, 1988, the United States banned the importation of ivory from Burundi that was not registered with the CITES Secretariat. Furthermore, the United States banned all ivory importations, both worked and unworked, from any country that al-

Despite high hopes, the 1986 quota system failed just as its two predecessors. Even though high quotas were established to draw stockpiles of illegal ivory into the officially regulated system, most traders preferred to smuggle the ivory rather than bother with the paperwork to obtain a quota authorization.

By the spring of 1989, it was clear that a regulated market in ivory was simply not effective and that a complete ban on ivory was the only viable option to save the elephant. In May of that year, Kenya and Tanzania called for a worldwide ban on the trade of ivory after a drastic decline in the elephant population.[204] The nations feared that the continued slaughter would discourage tourism, which provided a substantial source of income.[205] Immediately after the announcement, France responded by banning the importation of ivory.[206] Shortly thereafter, the United States followed with a temporary ban on imports until the CITES conference in October could address the matter.[207] More importantly, Japan announced that it would ban all imports of carved ivory and allow only raw ivory, which came directly from African producer countries, accompanied by proper documentation.[208]

As a result of the call for a complete ban on ivory trade, a split between the African nations developed. East African countries, such as Kenya and Tanzania, facing an elephant population crash favored the ban, while the southern African nations, including Zimbabwe, Zambia, Botswana, and South Africa disapproved of it.[209] These southern nations did not have a significant poaching problem and used profits from the sale of ivory to finance their elephant conservation efforts.[210]

In October 1989, at the Seventh Conference of the Parties to CITES, attending nations instigated a two-year moratorium on the sale of ivory by a vote of seventy-six to eleven, with four absten-

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lowed importation of nonregistered Burundi ivory into that country. 53 Fed. Reg. 15,468 (1989).

204. N.Y. Times, May 12, 1989, § A, at 5, col. 1.

205. *Id.*; The Economist, July 1, 1989, at 15.

206. In 1988 alone, France imported three million dollars worth of carved ivory and four tons of uncarved ivory. Daily Telegraph (London), June 6, 1989, int'l sec., at 10.

207. 54 Fed. Reg. 24,758 (1989).

208. The Economist, July 1, 1989, at 16.

209. Chicago Tribune, Oct. 14, 1989, § C, at 14.

210. *Id.*

tions.[211] Five African nations, Zimbabwe, Botswana, Mozambique, Malawi, and Burundi, immediately announced their intention to continue the ivory trade despite the ban.[212] These countries which voted against the ban have relatively small elephant populations, and consequently, no serious poaching problem.[213] They resisted a complete prohibition, in part, because of their success in financing conservation efforts through the sale of ivory.[214] These countries have tried to preserve the elephant population by giving it economic value. Under their conservation plan, a certain number of elephants are killed each year and the profits from the sale of the ivory are distributed to the people living in rural areas.[215] This provides incentives to those people living near and around the elephants to protect them as an economic resource.

Despite their resistance, the ban will be successful if the United States, Western Europe, and particularly Japan strictly enforce it and drive down the demand for ivory. Although still in its early stages, the ban appears to be working. The price for poached ivory reportedly decreased by 95% within months of the ban's institution.[216] This was apparently a direct result of the closing of ivory factories in Hong Kong, China, and Japan. Thus, the closing of the Asian market caused ivory prices to collapse, and with them, the incentive to poach.[217] If the lack of incentive causes poaching to subside, then in a few years, a sustained yield of ivory through managed harvesting may be possible.

Critics of the ban fear that it will eventually encourage rather than discourage poaching.[218] They fear that as existing stocks of

211. CITES, PROCEEDINGS OF THE SEVENTH MEETING OF THE CONFERENCE OF THE PARTIES (1989).

212. Fin. Times, June 23, 1990, § I, at 6.

213. *See generally* Chicago Tribune, Oct. 14, 1989, § C, at 14. "Zimbabwe, Botswana, Malawi, Namibia and South Africa have shown that a combination of controlled hunting—geared to keeping the herds at optimum strength—and vigorous enforcement of anti-poaching laws works much better [than a complete ban]." *Id.*

214. Simmons, *Endangered Species Protection*, in HERITAGE FDN. REP., April 19, 1990, at 18.

215. Chicago Tribune, Oct. 14, 1989, § C, at 14. According to range scientists, "[t]he answer is to channel earnings from tightly controlled legal hunting and legal products into the villages in elephant country, and to compensate farmers for the inevitable damage to their fields from these wild animals." *Id.*; *see also* Simmons, *supra* note 214, at 18.

216. Chicago Tribune, Oct. 14, 1989, § C, at 14.

217. *Id.*; Leakey, *supra* note 38, at 13.

218. Simmons, *supra* note 214, at 18; Huxley, *Lies, Damned Lies and Population Figures*, The Independent, June 30, 1990, at 13.

ivory decline, the price will be driven up and provide an incentive for increased poaching. However, this argument is flawed since it considers a small black market in ivory to be as grave a threat as a huge legitimate market. This is simply untrue, because it was the large legitimate demand for ivory in Japan and Hong Kong that originally threatened the elephant population. In contrast, a small black market with reduced demand may revive some poaching, but it poses a far less significant threat to the elephant species than that faced earlier.

In theory, the ivory producing nations of Africa have a financial interest in bringing ivory production within the sphere of legal commerce. This would shift profits from illegal hunters and brokers back into the local economy. Eventually, a regulated system of culling elephant herds of excess numbers could produce a sustainable supply of ivory, providing local employment and tax revenue. However, it must be kept in mind that ivory is relatively economically insignificant for African countries—total exports in raw ivory amount to only 0.2% of Africa's merchandise exports.[219]

Unfortunately, the theory of controlled ivory trade presents problems for countries with weak governmental structures. The lack of a strong central government makes control of the ivory trade difficult. In the past, much of the ivory trade was facilitated by corrupt civil servants and politicians, who were drawn by the immense potential profits.

Furthermore, the cost-benefit advantage of controlled ivory trade may not be entirely persuasive. A conflict still exists for the individual hunter between long-term and short-term gains. Many will opt for a high profit in the short term, rather than settle for a lower, sustainable return. A sustainable rate of ivory hunting may be as little as the rate of elephant reproduction, between 3% and 7% per year.[220] Unless governmental controls are strictly enforced, poachers and ivory traders may not be inclined to give up those high profits in exchange for some distant and indirect benefit to themselves and the nation as a whole.

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219. The Economist, July 1, 1989, at 16.

220. Some experts have argued that the highest sustainable rate of harvesting ivory occurs through natural mortality rather than through random or even selective hunting. *See* Pilgram & Western, *Managing African Elephants for Ivory Production Through Ivory Trade Regulations*, 23 J. APPLIED ECOLOGY 515, 527 (1986).

C. Sea Turtles

Unlike pandas and elephants, it is difficult to estimate the impact of trade on sea turtles. Sea turtles are inherently difficult to study, spending most of their lives at sea. They are threatened by development of the sandy beaches, maritime pollution, and hunting.[221] There are seven generally recognized species of sea turtle: Hawksbill, Leatherback, Kemp's (Atlantic) Ridley, Olive (Pacific) Ridley, Loggerhead, and two species of Green Turtle (*Chelonia mydas* and *Chelonia depressa*).[222]

1. Characteristics of the Species

The life of one species of sea turtle, the Olive Ridley, is representative of most turtle species.[223] A full grown Olive Ridley weighs approximately eighty pounds, has a shell the size of a manhole cover, and is found in the warmer waters of the Pacific Ocean from southern Japan to Baja, California.[224] Like other sea turtles, the Olive Ridley spends most of its life at sea.[225] Females are particularly vulnerable to hunters when they come ashore to nest in the sand. They come to the beaches in spectacular concentrations, known as arribazons, to lay their eggs. Adapted for life at sea, they move laboriously on land, struggling to get to a nesting site above the tide line. Once a female turtle finds a safe place, she digs a hole with her back flippers and lays approximately one hundred eggs, each the size of a ping pong ball.[226] She then gently covers them with sand and attempts to return to the sea. At this point, the female turtles are most vulnerable, and hunters slaughter them as they nest.[227] Awkward and slow out of water, they are easily caught and flipped over on their backs. Hunters are also

221. *See generally* Ehrenfeld, *Options and Limitations in the Conservation of Sea Turtles*, in BIOLOGY AND CONSERVATION OF SEA TURTLES 457 (Bjorndal ed. 1981).

222. Marine turtles are traditionally divided into two families, *Dermochelyidae* (Leatherback) and *Cheloniidae* (Green Turtle, Loggerhead, Hawksbill, Atlantic Ridley, and Pacific Ridley). However, all seven species share a common ancestor and show remarkably similar behavior in nesting. Carr, *Notes on the Behavioral Ecology of Sea Turtles*, PROCEEDINGS OF THE WORLD CONFERENCE IN SEA TURTLE CONSERVATION 19 (1979).

223. *See generally* A. CARR, THE SEA TURTLE SO EXCELLENT A FISHE (1986); *see also* A. CARR, HANDBOOK OF TURTLES: THE TURTLES OF THE UNITED STATES, CANADA, AND BAJA CALIFORNIA 347-410 (1952) (for a description of the life cycle of sea turtles).

224. A. CARR, HANDBOOK OF TURTLES, *supra* note 223, at 403-06.

225. *Id.*

226. *See id.* at 408-10.

227. The Independent, Mar. 4, 1990, at 12 (for a description of the slaughter).

known to collect nearly all the eggs by following the tracks the female has left from the nest on her way back to the ocean.

The eggs that survive the hunters will incubate for 45 to 60 days before the hatchlings thrash through a meter or so of sand to the surface.[228] When they have reached the surface of the beach, each hatchling separately faces the problem of finding the sea. There has been no adequate explanation of how the hatchlings determine what direction to take, but current theories emphasize the role of moon or sun light reflecting off the water in drawing the hatchlings to the water.[229]

Once they reach the water, the next stage in the young quarter-sized turtle's life is a short, violent encounter with the surf.[230] For the next four years, the turtle will develop and mature as it learns to survive in the ocean. Female turtles will eventually return to the same beach from which they originated in order to begin the nesting process again. Turtles are relatively safe from systematic hunting while at sea. However, they are frequently entangled in fishing nets, thus providing a small reward to a fisherman who may eat the meat and sell the shell.

All seven species of sea turtles are listed on Appendix I of CITES.[231] International trade has particularly exploited the population of three species in great numbers: Hawksbills for their shell;[232] Olive Ridleys for their skin and eggs;[233] and Green Turtles for their shell, skin, meat, and calipee.[234] However, extensive trade of these three species continues despite their CITES listing because four party nations, Japan, France, Italy, and Suriname, have taken reservations on sea turtles.[235] By entering a reservation to a species under Article XXIII, a party is not bound to the species' trade restrictions.[236]

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228. A. CARR, HANDBOOK OF TURTLES, *supra* note 223, at 21.

229. *Id.*

230. *Id.* at 21-22.

231. 50 C.F.R. § 23.23 (1989).

232. A. CARR, HANDBOOK OF TURTLES, *supra* note 223, at 380.

233. *Id.* at 410.

234. *Id.* at 353.

235. France and Italy subsequently withdrew their reservations after the European Economic Community adopted a common wildlife trade policy. Thomsen & Brautigam, *CITES in the European Economic Community: Who Benefits?*, 5 B.U. INT'L L. J. 269, 275 (1987). The reservations by Japan and Suriname remain in effect. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 271.

236. CITES, *supra* note 2, art. XXIII.

2. The Japanese Consumer Market

Japan is by far the world's largest consumer of sea turtles and sea turtle products.[237] Since 1970, over two million Hawksbill, Green Ridley, and Olive Ridley sea turtles have been killed for the Japanese turtle trade.[238] The Japanese leather industry utilizes large quantities of Green and Olive Ridley sea turtle skins to manufacture a variety of leather products. Some sea turtles are stuffed and sold as decorations. In addition, a small market exists for turtle meat and eggs.[239]

However, the largest portion of the Japanese sea turtle trade consists of trade in Hawksbill shell for the bekko industry. Bekko is a 300-year-old Japanese craft which uses the Hawksbill shell to decorate such articles as women's hair ornaments and combs.[240] Skilled craftsmen shape the scuts, hooves, and belly pieces of the turtle shell, blending its natural colors with a combination of heat, water, and pressure.[241] Designs are delicately carved into the desired shape and each item is buffed and polished.[242] The result is a beautiful piece of jewelry.

Japanese trade in sea turtles is an example of an inherent weakness of CITES. Theoretically, an Appendix I species should not be exported from its country of origin.[243] However, in practice, the draw of a market the size of Japan tempts many third world countries, such as Indonesia, Panama, Cuba, Singapore, and the Philippines, to export the sea turtles to Japan.[244] CITES can only function when both the importing and exporting countries are actively enforcing its provisions. When a consuming country fails to protect a species, the demand invariably finds a supply.

Japan's reservations on sea turtles allow Japan to import sea turtle products banned by CITES.[245] However, Resolution 4.25 requires that any import from a CITES party that does not hold a reservation

237. Comment, *Enforcement Problems in the Endangered Species Convention: Reservations Regarding the Reservation Clauses*, 14 CORNELL INT'L L.J. 444 (1981).

238. Milliken & Tokunaga, *The Japanese Turtle Trade: 1970-1986*, TRAFFIC BULL. 149 (1987) (Japan's report to the Center For Environmental Education).

239. *See generally* Reichart, *Farming and Ranching as a Strategy for Sea Turtle Conservation*, PROCEEDINGS OF THE WORLD CONFERENCE ON SEA TURTLE CONSERVATION 468 (1979).

240. *See* A. CARR, HANDBOOK OF TURTLES, *supra* note 223, at 380.

241. *Id.*

242. *Id.*

243. *See generally* FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 49 (conf. 5.10).

244. *Id.* at 58-98.

245. Milliken & Tokunaga, *supra* note 238, at 3.

must be accompanied by a legal CITES export permit.[246] The conference committee also recommended that the documentation requirements be followed even when a party holds a reservation.[247] However, Japan has not implemented any procedures for verifying whether there are valid permits from the exporting nation.[248] Because of the free entry of sea turtle products into Japan, and Japan's laxity in inspecting for permits, hunters routinely bypass the exporting nation's CITES regulations.

Prior to Japan's 1980 ratification of CITES, the country imported approximately forty tons of Hawksbill shell annually.[249] As a concession to the Appendix I listing of the Hawksbill, the Japanese Ministry of International Trade and Industry voluntarily imposed a thirty-ton import restriction on Hawksbill turtles.[250] This translates into approximately 28,000 Hawksbills per year.[251] However, this positive limitation on imports illustrates a basic misunderstanding about sea turtle behavior. Sea turtles usually live in discrete populations.[252] For example, Hawksbills from the Indonesian coast do not routinely reproduce with the population around the Seychelles. Japan's voracious market can easily wipe out an entire local population. Thus, the thirty-ton restriction simply fails to protect individual sea turtle populations.

As with ivory, CITES has failed to adequately protect sea turtles because the voracious market simply overwhelms CITES' ability to regulate trade. Japan's reservation allows their enormous consumer market for sea turtles to thwart the efforts of Indonesia, the Philippines, and other supply nations to protect the species. Most sea turtle habitats are located near less developed countries. Conservation of wildlife is not the primary concern of the people of these countries.

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246. FOURTH CONFERENCE PROCEEDINGS, *supra* note 54, at 81.

247. Milliken & Tokunaga, *supra* note 238, at 3.

248. *Id.*

249. *See Sea Turtles in Trade and Evaluation,* SEA TURTLE RESCUE FUND CENTER FOR ENVIRONMENTAL EDUCATION 3.

250. *Id.* at 2.

251. *Id.*

252. Scientific studies of tagged sea turtles indicate that adults return to the same beach area where they hatched. Since mating occurs in the waters off the beach prior to and during the nesting season, it seems there is very little cross-breeding between the discrete populations which are tied to their nesting sites. As a result, if the population of one nesting area is wiped out, it is unlikely that an area can be repopulated by other sea turtles without human assistance.

They are far more interested in the exploitation of any ready resource which can provide income.

3. Ranching and Farming for Commercial Trade

Despite the significant ramifications of Japan's sea turtle reservation, CITES' attention to the sea turtle trade has recently focused instead on CITES' exemptions for commercial trade in captively bred turtles.[253] The prospect of ranching or farming an endangered species is attractive to both environmentalists and commercial traders.[254] In 1981, the Third Conference of the Parties to CITES created a second type of exception for "ranching."[255] Ranching is the rearing in a controlled environment of specimens taken from the wild.[256] Proposals to transfer a population to Appendix II for ranching purposes must satisfy two general criteria: first, the ranch must promote the conservation of the local population; and second, the ranch must adequately identify and document the products of the operation to distinguish them from illegal products.[257] At the Fifth Conference in Buenos Aires in 1985, the parties adopted detailed marking standards for identification of ranched specimens.[258]

Ranching operations promote conservation by collecting the eggs or the young of a species having high hatchling mortality rates and raising them in a protected environment.[259] For example, sea turtles are especially vulnerable to hungry fish after they first enter the sea after hatching. Of the hundreds of sea turtle eggs laid, only a few survive to breeding age.[260] However, if the eggs are removed from the nest and hatched in an incubator, almost all of them can survive to maturity.[261] If some are released and others processed for trade, the net result will be an increase in the population of the species.

Additionally, breeding species in captivity can ease the pressure on the wild species by providing a market supply. If costs are kept down, the captively bred animals will undercut the price of hunted

253. *See generally* FIFTH CONFERENCE PROCEEDINGS, *supra* note 144.

254. Reichart, *supra* note 239, at 465-66.

255. THIRD CONFERENCE PROCEEDINGS, *supra* note 74, at 65.

256. *Id.*

257. D. FAVRE, *supra* note 14, at 208.

258. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 66.

259. D. FAVRE, *supra* note 14, at 206.

260. *Id.*; Reichart, *supra* note 239, at 469 ("It is a reasonable . . . estimate that under natural conditions 1 out of every 100 eggs laid will become a turtle. . . .").

261. D. FAVRE, *supra* note 14, at 206.

animals and may eventually put poachers out of business.[262] Article VIII, paragraph 4 of CITES states that animal species listed in Appendix I that have been bred in captivity for commercial purposes are to be treated as if they were in Appendix II.[263] Thus, the convention allows trade in captively bred animals, if a proper export permit is obtained. In 1979, the Second Conference of the Parties to CITES in San Jose established three conditions for captive breeding of Appendix I species. The stock of captively bred animals should be: i) established in a manner not detrimental to the survival of the species in the wild; ii) maintained without augmentation from the wild; and iii) managed in a manner designed to maintain the breeding stock indefinitely.[264] A subsequent CITES resolution requires any captive breeding operation to be registered with the CITES Secretariat.[265]

The captive breeding exception differs from the ranching exception in that a ranching operation must continuously replenish from the wild, while a "farming" or captive breeding operation establishes breeding stock independent of the wild.[266] If a farming operation establishes a self-sustaining population, it is likely to obtain an exemption from the CITES' limitations.[267] However, to obtain a similar exemption, ranching operations must demonstrate how they benefit the wild population despite their takings from the wild to supply the ranch.[268]

Proposals to exempt ranched turtles, in Suriname and the Reunion Islands, and farmed turtles in the Cayman Islands have not met with success.[269] In 1968, the Cayman Islands Turtle Farm attempted to farm Green Turtles.[270] Between 1968 and 1978, the farm developed an initial breeding stock by capturing a first generation of adult turtles in the wild along with their eggs to be hatched and raised. From this first generation of specimens, the farm planned to create a

262. *See id.*

263. CITES, *supra* note 2, art. VIII.

264. SECOND CONFERENCE PROCEEDINGS, *supra* note 55, at 49.

265. FOURTH CONFERENCE PROCEEDINGS, *supra* note 54, at 63.

266. D. FAVRE, *supra* note 14, at 205.

267. *See id.* at 190.

268. *Id.* at 207.

269. Petitions for ranching exceptions by Suriname, France (for the Reunion Islands), and the United Kingdom (for the Cayman Islands) were rejected after considerable debate at the 1985 meeting in Buenos Aires. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 129-34. The rejection should not be interpreted as hostility to ranching, as an Australian proposal for its population of *Crocodylus porosus* (crocodiles) was accepted at the same meeting. *Id.* at 136.

270. S. LYSTER, *supra* note 14, at 260.

permanent breeding population. The farm planned to hatch and raise a third generation of turtles to three or four years of age, at which time they would be slaughtered for their meat, skin, and shell. However, for reasons that are unclear, the second generation turtles failed to breed effectively.[271] Consequently, the farm was forced to rely on its initial stock of first generation turtles to provide hatchlings for the farm to raise for slaughter. The Cayman Islands Farm argued that because it had not taken eggs or adults from the wild since 1978, it was self-sustaining and thus entitled to an exemption under Article III of CITES.[272] However, it is clear that the farm cannot be independent of the wild until subsequent generations of turtles become breeders as well.

Another problem faced by the Cayman Islands Farm was that of effectively marking its turtle products to distinguish them from illegal products. The current mixture of legal and illegal products on the market makes enforcement extremely difficult. This mixing of products destroys the consumer's presumption that a can of turtle soup on the grocery shelf or a turtle shell comb in a boutique is legal. The solution to this problem may be to require that documentation accompany turtle meats, and that turtle shells have similar documentation or physical markings. However, these additional steps may further burden enforcement by increasing the level of inspection. Also, enforcement could be thwarted by illegal turtle products being masqueraded as legitimate imports.

Perhaps the most important question regarding farms and ranches is whether they actually benefit the wild population. The principal argument made in support of granting exemptions for ranched and farmed turtle products is that such trade will dampen the demand for wild products and relieve pressure on wild populations.[273] However, two untested presumptions underlie this argument. First, the argument presumes that the market for sea turtle products is fixed and will not expand as supply increases. Second, it presumes that trade in farmed products will not stimulate greater demand for turtle products which it will not be able to supply. Therefore, the argument

271. *Sea Turtles in Trade*, *supra* note 249, at 29-35. However, the CITES' audit team put a much more optimistic light on the question by noting that the captive turtles seemed to be thriving and the second generation could be reproducing in a number of years. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 482-89. One of the problems associated with farming or ranching sea turtles is the long maturation process.

272. *See* FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 132.

273. Reichart, *supra* note 239, at 466.

is unpersuasive unless it can be demonstrated that the farmed products will displace the illegal trade.

Thus, the failure of the Cayman Islands Turtle Farm to create a self-sustaining population and the inability of the ranching operations to show a benefit to the species or to develop an effective identification scheme has kept CITES from granting any exemptions.

The farming of sea turtles is representative of CITES' ineffectiveness in addressing the tension between the economic pressure for trade and the importance of conserving a species. For example, the Cayman Islands, a dependency of the United Kingdom, has been adversely affected by its failure to get an exemption. The turtle farm was subsidized by the government with the hope of creating an indigenous industry which could produce jobs and provide exports.[274] With an economy oriented toward tourism and offshore financial services, turtle products were the island's only potential export. Prior to the turtle's listing in 1979, ninety islanders were employed by the farm. While the permanent loss of ninety jobs may seem minor in a large economy, it was extremely damaging to a small economy striving for self-sufficiency.

IV. INADEQUACIES OF CITES

A. Compliance and Enforcement

Like most international agreements, CITES has inherent enforcement and compliance problems.[275] The obligations that such agreements create invariably conflict with the independent sovereignty of member parties. To deal with these conflicts, international

274. Since the Cayman Islands is a dependency of the United Kingdom, the British government made extensive efforts to get the Cayman Turtle Farm established. The farm lost its major market in 1978 when the Wildlife Service listed the Green Sea Turtle as an endangered species under the ESA. The farm could no longer sell turtle meat to American restaurants and lost its shipment point for transporting shells to Japan. The farm attempted unsuccessfully to obtain an exemption for farm sea turtles and argued that they did not run afoul of CITES because of the captive breeding exception. Subsequently, the farm filed suit challenging the ban, but the regulations were upheld. *Cayman Turtle Farm, Ltd. v. Andrus*, 478 F. Supp. 125 (D.D.C. 1979). After this defeat, the farm turned to the United States Congress where it was equally unsuccessful. *See Relation of the Endangered Species Act on Captive Propagation of Wildlife, Hearings before the House Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 97th Cong., 2d Sess. 49 (1982). In 1985, apparently aware that it could not meet the requirements for the CITES' farming exception, the farm joined France and Suriname in attempting to obtain a ranching exception.

275. For a general discussion of compliance problems at the international level, see R. FISHER, IMPROVING COMPLIANCE WITH INTERNATIONAL LAW (1981); O. YOUNG, COMPLIANCE AND PUBLIC AUTHORITY: A THEORY WITH INTERNATIONAL APPLICATIONS (1979).

agreements utilize various organizational forms ranging from a centralized administrative agency to a decentralized self-enforcement structure with minimal administrative involvement. Without a central administrative body, any compliance and enforcement takes on a ragged, almost anarchic quality. Of course, some types of decentralized compliance mechanisms can be effective in certain situations. Individual parties can threaten to impose sanctions on other member nations that violate the provisions of the agreement. In addition, parties may threaten to withdraw from the agreement to deter other parties from violating its terms. However, the imposition of sanctions and the withdrawal from the agreement are both drastic measures which will normally be taken only as a last resort.

There are two structural aspects to CITES which assist in its compliance. First, by holding biennial consultive meetings, the parties can respond to changing circumstances and directly lobby each other on specific compliance problems.[276] Second, the CITES Secretariat has evolved into an independent monitoring organization. The parties to CITES originally delegated responsibility for administration and funding of the Secretariat to the executive director of UNEP.[277] The executive director in turn delegated administration to the International Union for Conservation of Nature and Natural Resources ("IUCN"). Uneasy over the close relationship between the IUCN and CITES, the Secretariat staff became employees of the UNEP and moved into separate quarters in 1984.[278] Despite this move, the Secretariat remains a remarkably independent entity which actively monitors compliance with the terms of CITES.

If the Secretariat comes to the conclusion that there is a specific compliance or enforcement problem with a listed species, it is required to inform the appropriate member nation.[279] In addition, the Secretariat may present reports to the biennial conference of parties concerning CITES' enforcement in particular countries. For example, the Secretariat issued a report for the 1985 conference describing the Secretariat's attempts to improve CITES' implementation and compliance in Bolivia, Paraguay, and the European Economic Com-

276. *See* CITES, *supra* note 2, art. XI § 2.

277. *See id.* art. XII § 1.

278. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 263.

279. For example, such a notification was sent to the People's Republic of China and the United States by the Secretariat regarding the giant panda loans. *See* NOTIFICATION, *supra* note 114.

munity.[280] The report led to a resolution to prohibit all CITES trade with Bolivia, but allowed the individual parties to decide whether they would actually take such an action.[281] Despite these tools, the Secretariat has no direct enforcement power. It ultimately must rely on its power to persuade member nations to comply with CITES, or in extreme situations call for sanctions against a party.

The majority of trade in wildlife originates in the developing countries of Latin America, Asia, and Africa. Most of these products are transported to luxury consumer markets in the United States, Japan, and the European Economic Community. The consuming country must take the lead in enforcing the provisions of CITES. The ability of a strong consumer market to overwhelm a developing nation's wildlife conservation efforts is illustrated by both the trade in ivory and sea turtle products. If Japan were to withdraw its reservation on sea turtles, the consumer market would dry up, and the commercial poaching would end regardless of the producing nation's policies or enforcement. Similarly, the Toledo Zoo panda loan shows how an exporting country can be seduced by political and financial incentives.

Ultimately, enforcement is left up to the individual parties to the convention and depends upon their integrity and goodwill. The Toledo Zoo panda loan exemplifies the fragility of this reliance. The political and financial incentives were too lucrative for both the Chinese and American authorities. When the nations' authorities granted permits, there was no way left to prevent the loan, even though it was obviously detrimental to the species. One potential way of limiting such misuse of the exceptions to Appendix I is to require all permits to be approved by the CITES Secretariat. Unfortunately, such a bureaucratic procedure would be expensive and subject to the same abuses that have plagued the decentralized permit process. In the final analysis, the only truly effective enforcement techniques are the use of public pressure and higher profile legal action by conservation groups.[282]

Similarly, public pressure may be the only method of dealing with those industrialized nations which provide the consumer markets that encourage poaching. Japan's restriction on ivory imports in

280. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 287 (res. 5.8.1).

281. *Id.* at 38 (conf. 5.2).

282. For example, the suit by the World Wildlife Fund challenging the Toledo panda exhibition sufficiently embarrassed the Chinese and American governments so that these parties discontinued such arrangements.

the spring of 1989 undoubtedly reflected the torrent of negative publicity it received as the slaughter of elephants became public knowledge.

B. Determination of "Protected" Species

Most analyses of the ivory crisis consider the problem to be a failure of enforcement. Undeniably, the collapse of enforcement in the African countries was instrumental in bringing about the elephant population crash. However, the population crash also revealed a weakness in the CITES' listing procedure. At the First Conference of the Parties to CITES in Berne, the parties adopted criteria to determine which species were endangered and eligible for protection.[283] The criteria they adopted ranged from scientific population studies to nonscientific reporting of "habitat destruction, heavy trade or other potential causes of extinction."[284] These criteria focused on biological evidence of population decline. The severity of the threat to the population determined whether a species would be listed in Appendix I and be completely protected from trade, listed in Appendix II and be subjected to regulated trade, or not be protected at all.

Most criticism of the listing procedure has focused on the lack of rigor in determining the Berne Criteria. A number of decisions to add species to the appendices have not been based on any demonstrable threat to a particular species.[285] However, the ivory crisis indicates a problem of different dimension. The failure of CITES to move quickly during the eight year population crash of the African elephant indicates a lack of an alarm mechanism which will trigger protection for a species population in sudden decline.

While it is important that member nations retain their sovereignty and independence, the Secretariat must play a greater role in monitoring the status of species. Presently, the convention requires each member nation to prepare an annual report on its trade in listed species. These reports are important in monitoring compliance, but they are not sufficiently comprehensive to monitor the populations of listed species. At the Third Conference of the Parties to CITES, the parties adopted a resolution which called for periodic biological studies of species listed in the appendices at least every ten years. Such

283. FIRST CONFERENCE PROCEEDINGS, *supra* note 56, at 31.

284. *Id.*

285. For example, in 1987 the entire hummingbird family *Trochilidae* was added to Appendix II, despite little evidence of trade.

studies are expensive and time consuming. Due to the lack of funding, the program has not been carried out. The countries engaged in regulated trade in Appendix II species could finance these efforts. The Secretariat could evaluate the population studies and trade reports to identify Appendix II species which need to be transferred to Appendix I, or Appendix I species which need special attention.

C. Controlling Consumer Markets

Another major problem with CITES is its failure to address the power of the consuming markets to overcome attempts by producing nations to protect endangered species. The CITES reservation policy allows a consumer market country like Japan to effectively subvert the regulatory controls of a producing nation like Indonesia. The huge Japanese demand for sea turtles is, by itself, a major threat to the species. Acting like a mercantile vacuum cleaner, it sucks in contraband trade from countries which lack effective mechanisms to stop poaching and smuggling.

Reservations are common in international agreements. It is possible that without reservation provisions, a number of nations would not become parties to regulatory treaties such as CITES. These nations would argue that such agreements without reservations are an abdication of their sovereignty. At the same time, the reservation provisions can render the listing of a species in either appendix ineffective, as Japan's reservation on sea turtles has demonstrated. CITES has taken a big step toward lessening the negative impact of reservations where only the market country has taken a reservation. CITES now requires Appendix II level documentation for countries with reservations on Appendix I species.[286] Ultimately, the solution to reservation problems is the same as with all enforcement problems: Public pressure must reduce or eliminate the consumer market, thereby inhibiting trade in species.

V. CONCLUSION: A PROPOSED SOLUTION

CITES has failed to stop the deteriorating populations of the African elephant, the sea turtle and to a lesser extent, the panda. Eventually, the African elephant may yet be saved, trade in sea turtle products may be reduced or eliminated, and the few pandas available may be left alone to try and replenish the species. The plight of these

286. FIFTH CONFERENCE PROCEEDINGS, *supra* note 144, at 66.

species casts grave doubts upon the basic premise of CITES—that the preservation and conservation of endangered species can coexist with commercial trade.

However, the mandate to consuming nations to shut down wildlife trade raises an interesting but difficult ethical problem. Arguably, the industrial economies exploit the natural resources of developing countries through the wildlife trade. However, shutting down the trade eliminates an important source of income for the economies of lesser developed nations. The impact on a consuming nation is minimal and usually means giving up a luxury item, while a producing nation gives up a valuable source of much needed income. Unfortunately, the burden of preserving species falls disproportionately on the producing nations.

One method of resolving this dilemma and providing economic motivation for the producing nations to resist the draw of the consuming market is to transfer payments from developed nations to underdeveloped nations to compensate them for the loss of income. Common sense and fairness should compel us to compensate those who shoulder the greatest burden. While CITES has a very small stick, it has no carrot at all. For example, there is very little positive reinforcement for Indonesia to improve their protection of sea turtles. The turtles are not a tourist attraction and provide no income unless hunted. However, if CITES rewarded Indonesian conservation efforts with cash payments, the result would be a positive economic inducement to go along with public pressure and moral imperatives to close the market. A central fund, administered by the CITES Secretariat, could disburse funds after certifying that a producing country had made a good faith effort to protect its endangered wildlife. This would create economic motivation to enforce CITES and provide the Secretariat with a device for negotiating leverage.

The obvious problem with such a proposal is a lack of funds. Presently CITES depends on fees collected from the parties. Funding of international organizations is notoriously inconsistent and is not easily expandable. However, there are potential sources of funding in the currently lucrative trade in wildlife. For example, the United States imports wildlife equal to approximately $600 million a year. This includes primates for medical research, reptile skins, live parrots, and other birds. A ten-percent tax on all wildlife imported into the United States would produce $60 million which could be allocated to CITES. If the world trade amounts to $5 billion annually, the legal

trade in wildlife could fund the fight against the illegal, black market trade.[287]

In the final analysis, CITES as presently structured, is effective only as a vehicle for public pressure and international opinion. If it is, as has been suggested, the most successful international treaty concerned with the conservation of wildlife, it is in part because of the vigorous advocacy of various conservation groups and their skill in drawing on public support. Nevertheless, public opinion can be fickle, and with centralization of more power in the Secretariat and a steady source of income, CITES may continue the battle to preserve wildlife, even if public interest in the environment wanes. However, for CITES to be effective, the financial burdens of wildlife preservation must be reallocated from the developing nations which supply the wildlife to the consuming nations which demand such products.

287. The system would resemble the use of duck hunting license fees to preserve wetlands.