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ENFORCEMENT PROBLEMS IN THE ENDANGERED SPECIES CONVENTION: RESERVATIONS REGARDING THE RESERVATION CLAUSES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora attempts to balance legitimate trade interests in renewable natural resources with the need to protect endangered species. The agreement contains a series of reservation clauses, which allows member states to opt out of protecting any species covered by the treaty. As a result of these clauses, commercial exploitation continues to threaten endangered species. The problem is aggravated by the lucrative market for wildlife products.


2. See Convention, supra note 1, preamble (discussing international trade and the economic value of wild fauna and flora, while also recognizing the need to protect species from overexploitation); Speech by Lee M. Talbot, Director General of the International Union for Conservation of Nature and Natural Resources (IUCN):

As viewed by IUCN, [the Convention] is neither [a preservationist convention nor a traders' convention] exclusively, it is a conservation convention which through the regulation of trade seeks to avoid the loss of species and to assure the sustainability of the yield of benefits from wild flora and fauna to present and future generations.


3. See text accompanying notes 45-73 infra.

4. See text accompanying notes 74-82 & 101-10 infra.

5. Dr. Arnd Wunschmann, Director of Munich's Hellabrunn Zoo, has stated that "the illegal trade in furs, trophies and protected animals now has higher profit margins than the drug traffic." Sand, supra note 2, at 57. Moreover, the wildlife smuggler has less chance of getting caught than a narcotics dealer, and fines and prison sentences are "woefully inadequate." Id. at 58; letter from David Mack, Assistant Director, TRAFFIC (U.S.A.), to Stephen Yale-Loehr, at 1 (April 3, 1981) (on file at Cornell International Law Journal). TRAFFIC stands for Trade Records Analysis of Flora and Fauna in Commerce.
This Note examines the problems arising from the Convention's reservation clause system. Section I discusses the agreement's history and structure, focusing on the reservation clauses. Section II examines the effect of multiple reservations and trade between a reserving party and a nonmember on the saltwater crocodile and sea turtle species. The Note concludes with proposals to limit abuse of the reservation clauses.

I

THE CONVENTION

A. HISTORY OF THE CONVENTION

In the early 1960's, nations and concerned groups began to muster support for an international convention to regulate trade in endangered species. They recognized that existing international agreements focusing solely on national conservation measures were insufficient. In 1963, the Eighth General Assembly of the International Union for Conservation of Nature and Natural Resources (IUCN) resolved to draft a treaty on the problem. The IUCN circulated two formal drafts for comments by member governments in 1967 and 1969; Kenya and the United States also prepared drafts. These documents were combined into a unified working paper, which formed the basis of the 1973 Washington Plenipotentiary Conference to Conclude and International Convention on Trade in Certain Species of Wildlife.

B. STRUCTURE OF THE CONVENTION

The Convention attempts to protect endangered species by regulating international trade through a system of export and import

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6. This Note defines "endangered species" as those species "threatened with extinction." See Convention, supra note 1, art. II(1). The Convention also protects species that "although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation." Id. art. II(2)(a). For analogous definitions of "endangered" and "threatened" in U.S. legislation, see note 9 infra.


9. 68 Dep't State Bull. 613, 615 (1973).


11. 68 Dep't State Bull. 613, 615 (1973).

As of March 1981, 67 states were parties to the Convention. New Delhi Proceedings, supra note 2, Plen. 3.2, at 2.
permits. The three Appendices list the various species covered under the Convention. Each appendix indicates the degree of trade regulation, and thus the degree of protection, afforded that species. Appendix I lists all species threatened with extinction that are, or may be, affected by trade. The Convention strictly controls trade in Appendix I specimens, allowing it only if both the importing and exporting states issue permits. The importing state must make three determinations before issuing an import permit to the trader. It must determine that the import will not be detrimental to wild populations of the species, that the recipient of a living specimen is suitably equipped to care for it, and, most importantly, that the specimen will not be used primarily for commercial purposes. An exporting state must determine that the importing state issued an import permit before it may issue an export permit. In addition, the exporting state must determine that the specimen's export will not be detrimental to the survival of the species, that the specimen was not obtained "in contravention of the laws of that State for the protection of fauna and flora," and that living specimens will be transported safely.

12. For purposes of the Convention, "species" is defined to mean "any species, subspecies, or geographically separate population thereof." Convention, supra note 1, art. I(a). "This definition permits geographically isolated populations to be protected regardless of the worldwide status occupied by the remainder of the species." Legislative Development, supra note 7, at 1219 (footnote omitted).

The Convention defines "trade" to mean "export, re-export, import, and introduction from the sea." Convention, supra note 1, art. I(c). The last phrase is defined as "transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State." Id. art. I(e). "Re-export" means "export of any specimen that has previously been imported." Id. art. I(d).

13. Article II specifies the general categories of species and subspecies to be listed in each appendix. Appendix IV sets forth a model export permit.

14. Convention, supra note 1, art. II(1).

15. The treaty defines "specimen" as any animal or plant, whether dead or alive, and any readily recognizable part or derivative thereof. Id. art. I(b). Derivatives include such items as fur coats and alligator-skin handbags. 68 DEP'T STATE BULL. 616 (1973).

The scope of the term "specimen" was the focus of some controversy at the Plenipotentiary Conference. States favoring wide application of the Convention urged coverage for all derivative parts of the listed species without the requirement of placing such parts in the appendices. Other states favored limiting the term to primary products and those derivatives specifically listed in the appendices. The Convention reflects a compromise: readily recognizable parts or derivatives of Appendix I plants and Appendix I and II animals need not be specifically listed to receive protection; however, readily recognizable parts or derivatives of Appendix II & III plants and Appendix III animals must be listed. Convention, supra note 1, art. I(b); 68 DEP'T STATE BULL. 613, 616 (1973).

16. Convention, supra note 1, arts. III(2), (3).

17. Id. art. III(3)(a), (3)(b).

18. Id. art. III(3)(c).

19. Id. art. III(2). Similar requirements are imposed on re-exports and specimens introduced from the sea. Id. art. III(4), (5).
Appendix II includes species that, although not presently threatened with extinction, may become so unless their trade is strictly regulated.\(^20\) The Convention does not require an import permit for either the importation of Appendix II species or as a prerequisite for the acquisition of an export permit. In other respects, the requirements for an Appendix II export permit are similar to those for an Appendix I export permit.\(^21\) Unlike Appendix I species, parties may use Appendix II species for commercial purposes.\(^22\)

Appendix III includes all species that individual parties have regulated within their own jurisdictions whose protection requires the cooperation of other parties.\(^23\) The Convention requires an export permit for Appendix III species only when the export is from a state that has included that species on its Appendix III list.\(^24\) In order to import an Appendix III specimen, the importer must present only a certificate of origin, an export permit, or a re-export certificate.\(^25\)

The Convention's drafters listed over 1500 species of plants and animals; the parties have added more by amendment since then.\(^26\) While the Convention text fails to define the scope of the term "amendment," the report of the U.S. delegation to the Plenipotenti-

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\(^{20}\) Id. art II(2)(a) Appendix II also encompasses other species that must be regulated to facilitate effective trade controls on the potentially threatened species. Id. art. II(2)(b).

\(^{21}\) Id. art. IV(2). The requirements for re-export and introduction from the sea of Appendix II specimens are less stringent than for Appendix I specimens. Compare id. art. IV(5), (6) (Appendix II species) with id. art. III(4), (5) (Appendix I species).

\(^{22}\) Compare id. art. IV(4) with id. art. III(3)(c).

\(^{23}\) Id. art II(3). Since Appendix III is composed of species identified by individual parties rather than by mass party agreement, no Appendix III is included in the original text of the Convention. 27 U.S.T. 1087, 1091 n.1.

\(^{24}\) Convention, supra note 1, art. V(2). If an export permit is required, the exporting state must determine that the specimen was not obtained illegally and that living specimens will be transported safely. Id.

\(^{25}\) Id. art. V(3), (4). The Convention is to be implemented on a national level. Id. art VIII(1). For discussion of implementing legislation enacted by the United States, see text accompanying notes 90-96 infra. The Convention directs parties to take appropriate measures to prohibit trade in specimens in violation of the treaty. Convention, supra note 1, art. VIII(1). These domestic measures may be stricter than the Convention's provisions. Id. art XIV(1). Each party must maintain trade records of specimens covered by the Convention, id. art. VIII(6), and submit reports of such information as well as of other enforcement measures instituted to the secretariat. Id. art. VIII(7). The parties must also set up a management authority to grant permits and a scientific authority to advise the management authority on the possible detrimental effects of import or export. Id. arts. III(2)(a), (3)(a-b), (5)(a), IV(2)(a), (3), (5)(b), (6)(a), IX(1).

ary Conference indicates that, in addition to adding and subtracting species, the term encompasses shifting a species from one appendix to another. Two procedures exist for amending Appendices I and II. One method allows members to vote on amendments at the biennial conference of the parties. Each amendment must pass by a two-thirds majority of the parties present and voting. A second method enables parties to initiate amendments between conferences by submitting proposed revisions to the secretariat. The secretariat transmits the proposal to all the parties and later circulates comments by parties, as well as its own recommendations. If the secretariat receives no objections within thirty days, the parties adopt the amendment. An objection by a party, however, triggers a postal vote: two-thirds of the parties must then cast affirmative votes to adopt the amendment. Under either procedure, amendments to Appendices I and II enter into force ninety days after adoption (except vis-à-vis those parties that submit written reservations to the revisions within the ninety day period).

To amend the Convention’s text, the secretariat must convene an extraordinary meeting of the parties. A two-thirds majority of those parties present and voting is required to adopt a textual amendment. The amendment enters into effect for the parties that accept it sixty days after two-thirds of the parties ratify it. To date,

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27. 68 DEPT STATE BULL. 613, 617 (1973).
28. Convention, supra note 1, art. XV(1)(a-b). The Convention provides for a regular “meeting of the Conference of the Parties” at least once every two years after the entry into force of the Convention. Id. art. XI(1), (2). Conference meetings have been held in 1976 (Berne, Switzerland), 1979 (San José, Costa Rica), and 1981 (New Delhi, India). New Delhi Proceedings, note 2 supra; 1 San José Proceedings, supra note 26, at 3. The second meeting of the conference of the parties was delayed until 1979 because of a special working session of the parties held in Geneva in 1977. Id.
29. Convention, supra note 1, art. XV(2).
30. Id.
31. Id. art. XV(2)(f).
32. Id. art. XV(2)(g-j). For discussion of the objection/no objection distinction in this procedure, see 68 DEPT STATE BULL. 613, 617 (1973).
33. Id. art. XV(3). For a discussion of the Convention’s reservation clause system, see text accompanying notes 45-51 infra.

A state may alter its Appendix III list by informing the secretariat of the changes desired. Convention, supra note 1, art. XVI. The secretariat then communicates this information to the parties. Id. art. XVI(2), (3). Deletions from the appendix take effect 30 days after communication; additions become effective 90 days after communication. Id. A party may enter a written reservation to an Appendix III species at any time. Id. art. XVI(2).
34. Id. art. XVII(1). The secretariat is to convene an “extraordinary meeting” at any time on the written request of at least one-third of the parties. Id. arts. XI(2), XVII(1).
35. Id. art. XVII(1).
36. Id. art. XVII(3).
this unwieldy procedure has only been used once.37

The parties also have the option of “modifying” the Convention informally, through recommendations and decisions. Recommendations are designed to improve the effectiveness of the Convention; examples include a recommendation on illegal trade in Appendix II and III species39 and criteria for the review of Appendix I and II wildlife species native to individual parties.40 Decisions are criteria or standards used to guide members, as well as the secretariat, in administrative and procedural implementation of the treaty.41 Both recommendations and decisions are methods exhibiting flexibility and informality; the parties may adopt either one by consensus or majority vote.42

However, they are unenforceable and add only an advisory gloss to the Convention.43 At most, recommendations and decisions represent a statement by the parties that they will attempt in good faith to meet the statement’s objectives expressed therein.44

C. THE RESERVATION CLAUSES

The Convention allows a state to opt out of extending protection to a species.45 These “reservations” may take three forms. First, a party may enter a reservation when it joins the Convention.46 This reservation will exist until the party decides to withdraw it.47 Second, a party may make a reservation to an amendment to Appendices I or II within ninety days of the amendment’s adoption.48

38. Convention, supra note 1, art. XI(3)(e).
39. 1 San José Proceedings, supra note 26, at 123-24, 186-87.
41. The secretariat has implied this definition from articles XI(3)(a) and XI(5) of the treaty. See II San José Proceedings, supra note 26, at 1121 (Doc. 2.36, adopted by the parties in II San José Proceedings, supra note 26, at 173).
42. Id.
43. Interviews with Joan Anthony, note 37 supra.
44. Id.
45. Convention, supra note 1, arts. XV(3), XVI(2), XXIII.
46. Id. art. XXIII(2). The article provides in pertinent part:
   2. Any State may, on depositing its instrument of ratification, acceptance, approval or accession, enter a specific reservation with regard to:
      (a) any species included in Appendix I, II or III; or
      (b) any parts or derivatives specified in relation to a species included in Appendix III.
   3. Until a Party withdraws its reservation entered under the provisions of this Article, it shall be treated as a State not a party to the present Convention with respect to trade in the particular species or parts or derivatives specified in such reservation.
47. Id.
48. Id. art. XV(3). The provision states:
Finally, a state may submit a written reservation as to an Appendix III species at any time. The Convention does not require that members give reasons for their reservations. A member entering any type of reservation is treated as a nonparty to that portion of the Convention it opts out of with respect to trade in the species or part or derivative concerned.

The effect of a reservation to an amendment upgrading a species from Appendix II to Appendix I is unclear, however. No express provision governs amendments that change a species' status. Article XV(3) implies that reserving parties are to be treated as nonmembers regarding those species. However, this interpretation, when applied to an upgrading amendment, violates the Convention's purpose. A party that has accepted Appendix II status for a species, with its corresponding requirements, would be able to escape its responsibility totally by reserving to an amendment upgrading a spe-

During the period of 90 days provided for. . . any Party may by notification in writing to the Depositary Government make a reservation with respect to the amendment. Until such reservation is withdrawn the Party shall be treated as a State not a party to the present Convention with respect to trade in the species concerned.

49. At any time after the communication of such [appendix III] list, any Party may by notification in writing to the Depositary Government enter a reservation with respect to any species or any parts or derivatives, and until such reservation is withdrawn, the State shall be treated as a State not a Party to the present Convention with respect to trade in the species or part or derivative concerned.

Id. art. XVI(2).

50. New Delhi Proceedings, supra note 2, Doc. 3.22, at 7 (report from the secretariat on effects of reservations). Most states enter reservations for economic reasons. Id. Japan, for example, reserved as to the green, hawksbill, and olive ridley turtles because of the local tortoiseshell industry. See notes 59 & 105 infra.

Canada and Switzerland, however, have entered reservations for noneconomic reasons.

Canadian reservations on native species have been entered because the species are not considered endangered or threatened and they are sufficiently protected under domestic laws and enforcement measures. Canada also disagrees with the listing of entire groups of species if they are not truly endangered and/or are not common in international trade.


51. Convention, supra note 1, arts. XV(3), XVI(2), XXIII(3).

52. See text accompanying note 27 supra.

53. Convention, supra note 1, art. XV(3). Reservations to the saltwater crocodile, see text accompanying note 74 infra, illustrate the uncertainty resulting from upgrading a species. The French management authority claimed that its reservation to the Appendix I listing placed trade in the species outside the Convention totally. Italy, Switzerland, and West Germany, however, also reserving to the species’ Appendix I status, continued to accord Appendix II treatment. New Delhi Proceedings, supra note 2, Doc. 3.22, at 8-9.
cies to the more restrictive Appendix I list. Parties that enter a reservation to a species elevated to Appendix I status should still be obligated to extend at least Appendix II protection.

No record exists of the parties' intentions in including reservation clauses in the treaty. While the concept of allowing reservations somewhat undercuts the conservationist goals of the Convention, the following countervailing considerations may account for its presence. First, the IUCN may have incorporated the reservation clauses in an effort to induce more participation in the Convention. With so many parties, dissension over the listing and the status of protected species would be inevitable. The reservation clauses aim to prevent conflict over these details from impeding general support for the Convention. Second, the drafters recognized the existence of legitimate trading interests in wildlife. The Convention generally endeavors to control, not to eliminate, wildlife trade. The reservation clauses encourage greater participation by allowing states to demonstrate general support for protecting endangered wildlife while also protecting their own economic interests. Without such a device, the Convention would require states to choose between total protection and no protection at all. A country whose economy depends largely on the processing or exporting of a protected species

54. The secretariat admits that, under a literal reading of the treaty language, such reservations result in a total delisting of that species for the party entering the reservation. Id at 9. In view of the absurdity of this result, the secretariat called on reserving parties to continue to give Appendix II protection to reserved species. Id.

55. The IUCN drafters of the Convention thought worldwide support for the Convention was essential. The IUCN explained the permissive nature of the treaty provisions: "The treaty will only be of consequence if a significant number of countries adhere to it, including the major exporters and importers of wildlife." 3 IUCN Bull. (new ser.) 1 (1972).

56. "While the scientific-taxonomic classification work undertaken to improve the appendices of the convention so far has demonstrated a high level of global consensus, some issues are bound to be controversial due to socio-economic reasons," Sand. supra note 2, at 58.

57. See, e.g., 3 IUCN Bull. (new ser.) 1 (1972) ("[the Convention] will not halt all unwarranted exploitation of wildlife but will strive towards rational use on a sustainable yield basis."); Sand, supra note 2, at 57 states:

[T]he convention seeks to draw a clearer line between illegal traffic and black markets on one side, and legitimate trade in renewable natural resources on the other. A number of countries have well-managed programmes of wildlife conservation and utilisation, enabling them to harvest the excess yield as "interest" on their resources without drawing on the capital. To third world countries in particular, these programmes may be important development factors and a significant source of foreign exchange earnings on the world market.

Id.

In striking this balance, however, the Convention does prohibit "trade" in the larger commercial sense for Appendix I specimens. See text accompanying note 18 supra.

58. Of course, states may bypass the Convention and attempt to protect endangered species through domestic legislation. See notes 89-91 infra and accompanying text. The insufficiency of such unilateral actions, however, prompted the need for the Convention in the first place. See note 7 supra and accompanying text.
would be reluctant to choose total protection. The threatened economic interest necessary to block ratification need not be that large; an effective lobby group with a strong interest in continuing wildlife trade would suffice. Finally, the drafters probably envisioned only occasional use of the clauses. One commentator has cited the public nature of the reservations plus the "weight of international opinion" as factors limiting use of the reservation clauses. Sporadic invocation of the reservation clauses by individual states has not thus far diminished the Convention's overall effectiveness. The Convention has focused attention on the problem of commercial exploitation of endangered species. Moreover, the Convention's documentation requirements have increased confiscations of illegally obtained or traded species and created an international store of data on endangered species.

D. PROBLEMS WITH THE RESERVATION CLAUSES

Normally, a reservation fails to free a state of the Convention's documentation requirements. While a state entering a reservation is treated as a nonparty to the Convention for that species to which it reserves, Article X requires a nonparty to supply "comparable documentation" that "substantially conforms" to the Convention requirements to permit trade of that species with a Convention member. Thus, the agreement's requirements safeguard trade between a reserving party and a nonreserving member.

59. For example, the governor of Nagasaki delayed Japanese acceptance of the treaty because of the local tortoiseshell industry, which employs 2500 people and grosses over 100 million dollars a year. [1980] INT'L ENVIR. REP. (BNA) (Current Rep.) 25. Thus, an industry of merely local importance may be large enough to lobby for its own interests.

60. Legislative Development, supra note 7, at 1227.

61. Sand, supra note 2, at 58 ("[despite some problems and loopholes], [o]n the whole ... the convention may be said to have demonstrated its practical viability during its first four years of operation."). But see New Delhi Proceedings, supra note 2, Inf. 3.2, at 2: "so long as non-members continue to outnumber the [members] of the Convention and as long as the ranks of the former include unscrupulous traders in wildlife and forest produce, the effectiveness of [the Convention] is bound to be partial." Id. (speech by Rao Birenda Singh, Indian Union Minister for Agriculture, Rural Reconstruction & Irrigation 25 February 1981).

62. Sand, supra note 2, at 56. The author lists several major seizures in 1979 alone: 2.5 tons of fur pelts in Texas; 141 rhinoceros horns in West Germany, worth several million deutschemarks; and 150,000 snake skins and 500 furs in India. Id.

63. The Convention requires parties to keep trade records, including the number and types of permits granted, and to send the secretariat reports of trade information and implementation measures taken to enforce the Convention. Convention, supra note 1, art. VIII (6, 7).

64. See text accompanying note 51 supra.

65. Convention, supra note 1, art. X.

66. See also New Delhi Proceedings, supra note 2, Doc. 3.22, at 7 (banning commercial trade in Appendix I specimens between nonreserving members and reserving states).
Nevertheless, reserving states may bypass the Convention totally in two situations: trade between a reserving party and a non-member; and trade between members that have entered identical reservations (multiple reservations). In these instances, the result is one of trade between two nonparties; therefore, Article X's protection fails to apply.67

While both situations tend to undermine the Convention's effectiveness,68 multiple reservations are particularly ominous. They reopen the market for and encourage smuggling in Appendix I species. States with a large enough share of the market entering matched reservations could render nugatory the agreement's protection of a particular species.

Cooperation between importing and exporting states is necessary to fulfill the Convention's goal of protecting endangered species.69 As more states enter reservations to the same species, however, this cooperative effort collapses.70 The countries of origin bear the burden of increased poaching and smuggling encouraged by multiple reservations;71 these countries generally possess fewer financial and technical resources to handle the problem.72 To date, only crocodilians and sea turtles have suffered the consequences of these two methods by which reserving states can bypass the convention,73 but the problem may well spread to other species.

II
EXAMPLES OF THE RESERVATION PROBLEM

Ironically, the same reasons that warrant protecting a species under the Convention—scarcity and commercial value—may well subject that species to reservations. The discussion below develops this issue and analyzes the effectiveness of possible solutions. While

67. Id. Plen. 3.9, at 4 (adopting draft resolution recommending strict requirements for parties' acceptance of comparable documentation issued by nonparties (Com. 3.19)).
68. See New Delhi Proceedings, supra note 2, Inf. 3.8 (introductory remarks by M.K. Dalvi, chairman of the third conference).
69. See Wasserman, supra note 26, at 364 (“The initiative of violating the provisions of the Convention . . . arises largely among the buyers”).
70. Id. Plen. 3.9, at 4 (adopting draft resolution recommending strict requirements for parties' acceptance of comparable documentation issued by nonparties (Com. 3.19)).
71. Id. Plen. 3.9, at 4 (adopting draft resolution recommending strict requirements for parties' acceptance of comparable documentation issued by nonparties (Com. 3.19)).
72. See note 81 infra.
73. See text accompanying notes 74-82 & 101-10 infra.
SEA TURTLES AND THE SALTWATER CROCODILE ILLUSTRATE THE PROBLEMS OF RESERVATIONS MOST GRAPHICALLY, OTHER SPECIES ARE ALSO AFFECTED.

A. THE SALTWATER CROCODILE

1. The Problem

In 1979, under pressure from their luxury leather industries, France, Italy, West Germany, and Switzerland jointly refused to extend treaty protection to the saltwater crocodile (*Crocodylus porosus*), an Appendix I species. The former three states process over one million crocodile hides annually, which amount to sixty percent of the international trade in that species. The refusal of these four nations to extend protection to the species, together with Japan's reservation upon ratifying the Convention, represents "the first time global protection of a highly endangered species [has been] virtually undermined as a result of concerted action by industrial lobbyists in importing countries."

In addition to the threat posed by multiple reservations, the species is also threatened by trade between reserving states and Singapore, a nonmember. Singapore is the principal supplier of saltwater crocodile hides to Western Europe, yet has no native population of the species. The hides probably are obtained illegally in neighboring states. Because of the Convention's requirement that specimens not be illegally obtained, these hides could not be traded if the importing nations had not entered reservations.

Both multiple reservations and trade between a reserving state and a nonmember have subjected the saltwater crocodile to extensive poaching, and the species is now nearly extinct or reduced to small populations throughout its wide range. The importing states that have entered reservations tend to have more resources to


75. San José Proceedings, supra note 26, at 70-71.

76. New Delhi Proceedings, supra note 2, Doc. 3.22, at 1; 2 TRAFFIC (U.S.A.) Newsletter 6 (Fall 1980).

77. Id

78. New Delhi Proceedings, supra note 2, at 9.

79. Id

80. 44 Fed. Reg. 75,074, 75,074 (1979) (final rule listing the saltwater crocodile as an endangered species) (to be codified in 50 C.F.R. § 17.11); 44 Fed. Reg. 43,442, 43,443 (1979). The species is native to Australia, Papua New Guinea, Indonesia, Philippines, Thailand, Malaysia, Burma, Bangladesh, India, Cambodia, Sri Lanka, and Vietnam. Id.
enforce the Convention. Both enforcement of conservation laws and strict import and export controls are important aspects of the Convention's protection. Exporting countries tend to lack the financial resources necessary to prevent poaching and smuggling. Also, the native habitat of the saltwater crocodile is wild swampland; this makes game laws inherently difficult to enforce.

2. Responses to the Problem

The Convention neither prohibits nor limits the use of reservation clauses. Exporting states, however, may use the Convention's permit requirements and the comparable documentation requirement of Article X to restrict reserving states from further endangering the saltwater crocodile. Enforcement officials of an exporting state may refuse to grant export permits for specimens destined for a reserving state on the grounds that such export would be detrimental to the species' survival. Indeed, in the secretariat's view, the exporting state must refuse to grant a permit in the above situation. Hence, the permit requirement may diminish some trade in crocodile hides to reserving states. Because poaching and smuggling constitute a significant source of skins, however, the permit certificate requirements fail to solve the whole problem. The permit system curtails poaching only indirectly; traders in illegally obtained skins need only surmount the additional burdens of forging import permits or concealing goods.

In addition to poaching, other factors threaten the saltwater crocodile: expanding human populations have destroyed many crocodilian habitats, and in some areas the species is still killed as a man-eater. 44 Fed. Reg. 75,074, 75,074-75 (1979).


83. See notes 65-66 supra and accompanying text.

84. Convention, supra note 1, art. III(2)(a). A state may deny an export permit to Appendix II species destined for reserving states on the same grounds. Id. art. IV(2)(a).

For an example of export permit suspension for Appendix II species due to fear that trade would harm the species' survival, see [1978] INT'L ENVIR. REP. (BNA) (Current Rep.) 393 (ban by the Endangered Species Scientific Authority on trade in four species).

85. “[N]o exporting Party may authorize commercial exports of Appendix I species even though the importing Party might authorize the transaction on the basis of its reservation.” New Delhi Proceedings, supra note 2, Doc. 3:22, at 7.


87. An import permit is a necessary but not sufficient prerequisite for trade in crocodile hides to reserving states. In addition to the import permit requirement, whether forged or legally issued by the reserving state in compliance with article X's “comparable
Article XIV allows individual states to adopt domestic measures that are more rigid than those in the Convention. The United States and Papua New Guinea are two states that have adopted stringent legislation to protect the saltwater crocodile. Papua New Guinea’s laws prohibit trade in crocodile skins that measure more than twenty inches belly-width. The United States recently placed the saltwater crocodile on the Endangered Species List of the Endangered Species Act of 1973, thereby prohibiting its trade and possession in the United States. Unfortunately, these unilateral actions
play only a limited role in solving an international problem. Papua New Guinea’s ban on large skins protects adults, but leaves the young crocodiles vulnerable to hunters. Policing problems hinder both approaches. For example, distinguishing a purse stitched from a saltwater crocodile hide from a handbag made from an abundant crocodile species is difficult. Accurate identification is crucial, though, because of the differences in trade protection accorded to various crocodile species. Imports of saltwater crocodile hides illegally labelled as another unprotected species only hasten the former’s decline. The Endangered Species Act attempts to minimize the problem by incorporating in its Endangered Species List non-threatened species that resemble those species already listed. This measure reduces, but does not eliminate, policing problems.

In addition to protective domestic legislation, crocodile farms

the Secretary is directed only to issue such regulations as are necessary to conserve the species. Endangered Species Act of 1973, § 4(d), 16 U.S.C. § 1533(d) (1976). See 50 C.F.R. § 17.31 (1979) for measures implementing this section. In addition to the trade protection, inclusion of a species on either the endangered or threatened list triggers the availability of federal money to aid conservation and enforcement measures in foreign countries. Endangered Species Act of 1973, § 8(a), 16 U.S.C. § 1537(a) (1976).

Elimination of a domestic market only shifts the market elsewhere. Legislative Development, supra note 7, at 1217: “[T]rafficking in animals and their derivative parts is a lucrative business and will be maintained as long as markets exist in the world where such trade is not illegal.” Id.

Mohr, No Shortage of Customers for Wildlife, N.Y. Times, March 11, 1979, at E8. See also 2 IUCN BULL. (new ser.) 163 (1971) (discussing the difficulty in identifying species by their hide).

50 C.F.R. § 23.23 (1979) lists 11 crocodile species in Appendix I of the Convention, and all other species in Appendix II. The saltwater crocodile is also in Appendix I. See note 74 supra. Similarly, the Endangered Species Act currently protects nine species through inclusion on its “endangered species list; other species are not protected. 50 C.F.R. § 17.11 (1979). There are 28 crocodile species. PAPUA NEW GUINEA WILDLIFE DIVISION, WILDLIFE IN PAPUA NEW GUINEA: MOITAKA CROCODILE FARM (n.d.) [hereinafter cited as MOITAKA REPORT] (on file at Cornell International Law Journal).

Endangered Species Act of 1973, § 4(e), 16 U.S.C. § 1533(e) (1976). The section sets forth three criteria for determining similarity of appearance: (1) the nonthreatened species so closely resembles the threatened or endangered species that enforcement personnel would have “substantial difficulty” distinguishing the two; (2) the effect of that difficulty additionally threatens the endangered or threatened species; and (3) inclusion of the unlisted species will “substantially facilitate the enforcement and further the policy of the chapter.” Id. Implementing regulations are codified in 50 C.F.R. §§ 17.50-17.52 (1979). For example, the regulations include certain populations of the American alligator (Alligator mississippiensis) as similar in appearance to other endangered or threatened populations of the same species. 50 C.F.R. § 17.11 (1979).

The Convention itself also attempts to handle the “look-alike” issue, at least for Appendix II species. See Convention, supra note 1, art. II(2)(b).

The Parties currently are working on an identification manual to aid enforcement personnel. New Delhi Proceedings, supra note 2, Plen. 3.4. at 1-2; id. Plen. 3.6. at 3 (adopting resolution Com. 3.4. Annex extending the mandate of the identification manual committee until the fourth meeting of the conference of the Parties); id. Com. 3.4.

Papua New Guinea resolved the identification problem by setting a size limit of 20 inches belly-width for both saltwater and freshwater crocodiles. 2 IUCN BULL. (new ser.) 97 (1969).
and ranches are another means of unilateral protection. At these farms and ranches, crocodiles are bred and raised in captivity or semicaptivity. Proponents of the projects put forth three related goals: to prevent species extinction, to restore the wild population, and to provide a source of skins for the leather industry. The projects are still new, however, and presently supply only a small percentage of the international trade in crocodile hides.

B. Sea Turtles

1. The Problem

Although all species of sea turtles are highly endangered and

97. "Farming" and "ranching" carry distinctly different meanings. Ranching operations take young specimens from the wild and raise them in a controlled environment to commercial size. New Delhi Proceedings, supra note 2, Com. 3.12, para. (a); C.K. Dodd, Does Sea Turtle Aquaculture Benefit Conservation? 3 (1981) (unpublished paper on file at Cornell International Law Journal); 2 IUCN BULL. (new ser.) 163 (1971) (distinguishing farms from rearing stations). These projects justify their procedures by pointing to the large number of wild young that normally die before adulthood. For example, only one out of every 1,000 green turtle eggs may survive to adulthood. N.Y. Times, March 1, 1981, at A41, col. 3. Young crocodiles also suffer a high mortality rate. R. Whitaker, supra note 82, at 23 (saltwater crocodile hatching mortality rate as high as 90% in estuaries); Bolton, Crocodile Farming in Papua New Guinea, 14 ORYX 365, 366 (1978). Moitaka Report, supra note 94, at 4.

By contrast, a farm is self-perpetuating, raising specimens completely in captivity. Dodd, supra, at 3; 2 IUCN BULL. (new ser.) 163 (1971). Successful captive breeding farms are rare; the Papua New Guinea government's Moitaka crocodile farm is an exception. Moitaka Report, supra note 94, at 5; 44 Fed. Reg. 43,442, 43,443 (1979). See note 138 infra for discussion of the effect of this distinction on trade under the Convention.


100. As of early 1979, 145 crocodile farms had been established in Papua New Guinea, and hatchlings had been successfully reared for three years. Id. The Thai farm contains over 11,000 crocodiles. 2 IUCN BULL. (new ser.) 163 (1971). In 1970, 3,500 eggs were laid by breeding females on the farm. This figure is less than one percent of the two million crocodilian hides traded annually, however. See Sand, note 74 supra.

101. The exact number of sea turtle species is unknown. One authority lists eight kinds: Dermochelys coriacea (leatherback turtle); Chelonia depressa (flatback turtle); Caretta caretta (loggerhead turtle); Chelonia agassizi (Pacific black turtle); Lepidochelys olivacea (Pacific or olive ridley turtle); Chelonia mydas (green turtle); Lepidochelys kempi (Mexican or Kemp's or Atlantic ridley turtle); and Eretmocheys imbricata (hawksbill turtle). Carr, Great Reptiles, Great Enigmas, AUDUBON, March 1972, at 24-26. This Note only discusses reservations as to the green, hawksbill, leatherback, and olive ridley species.
listed in Appendix I, hundreds of thousands of them continue to be killed for world trade each year. Marine turtles are commercially exploited for many reasons: their shells are carved for jewelry and ornaments, the skin is tanned as leather, and the meat and eggs are considered delicacies.

France, Italy, Japan, and Surinam have entered reservations for one or more sea turtle species. Japan's reservations are especially discouraging, since Japan is one of the largest importers of sea turtle products. The sea turtle suffers from the same two phenomena that plague the saltwater crocodile: multiple reservations and trade between reserving states and nonmembers. Large numbers of sea turtles are killed in Mexico (a nonmember) each year, yet trade between that country and reserving states remains outside the Convention's scope. In addition, sea turtle nesting places, like those of

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102. 50 C.F.R. § 23.23 (1979) currently lists all sea turtles except the flatback turtle and the Australian population of the green turtle in Appendix I; the parties at the 1981 New Delhi Conference approved reclassifying both to Appendix I. See note 117 infra. For a discussion of the threat to extinction that sea turtles face, see 43 Fed. Reg. 32,800, 32,803 (1978) ("if the factors causing declines in some species of sea turtles remain unchanged, these sea turtles will be facing extinction ... in the foreseeable future."); see also id. at 32,804 (concluding that the Baja California population of green sea turtles would be in danger of extinction within three years).

103. One authority estimates that, based on extrapolations from the poundage of tortoiseshell (mostly hawksbill) traded, between 150,000 and 360,000 turtles entered the world market in 1976; 190,000 to 460,000 in 1977; and 250,000 to 590,000 in 1978. These figures fail to include another approximately 200,000 olive ridleys taken by Mexico and Ecuador each year for skin trade. Interviews with David Mack, supra note 5, at 2.

104. 43 Fed. Reg. 32,800, 32,803 (1978); N.Y. Times, March 1, 1981, at A41, col. 3 (green turtle eggs considered a delicacy in Mexico); Grove, supra note 81, at 296, 310.

105. France has reserved as to the green and hawksbill turtles; Italy, the green turtle, Japan, the green, hawksbill, and olive ridley turtles; and Surinam, the green and leatherback turtles. Reservations in force as of 1 January 1981, reprinted in New Delhi Proceedings, supra note 2, Doc. 3.22, at 3. Surinam's reservations became effective on February 15, 1981. Id. at 1.5. Italy, while reserving only as to the green turtle, exports many olive ridley turtles, in violation of the Convention's ban on commercial trade in Appendix I species. TRAFFIC (U.S.A.), Memorandum to Sea Turtle Conservationists 3 (Feb. 12, 1981) [hereinafter cited as Sea Turtle Memo] (on file at Cornell International Law Journal).

106. Sea Turtle Memo, supra note 105, at 2. In 1979, Japan imported 70,846 kilograms of tortoiseshell, over 160,000 kilograms of turtle skins, and more than 20,000 kilograms of turtle leather. Id. A significant amount of Japan's 1980 imports came from Convention parties. Id. at 2-3. Trade with these states will probably decrease, however, now that Japan is also a party and Article X's comparable documentation requirement applies.

107. The green and hawksbill turtles, in particular, suffer from multiple reservations. Reservations in force as of 1 January 1981, reprinted in New Delhi Proceedings, supra note 2, Doc. 3.22, at 3.

108. See 43 Fed. Reg. 32,800, 32,804 (1978). The annual Olive Ridley taken on Mexico's Pacific coast is estimated to be 500,000 to 1,000,000 turtles. Sea Turtle Memo, supra note 105, at 4; notes 103 supra & 110 infra. Mexico's trade with Japan is substantial. For example, over 90 percent of the turtle leather imported into Japan in the first nine months of 1980 came from Mexico. Sea Turtle Memo, supra note 105, at 5. Japan
the saltwater crocodile,109 are located in many states with little or no wildlife management.110 As a result of the above problems, there is little effective trade regulation of sea turtles.

2. Responses to the Problem

Efforts to save the sea turtle are similar to those that states have employed to protect the saltwater crocodile. On the national level, the United States has placed six species of sea turtles on its Endangered Species List111 and has banned all imports of sea turtles.112 In addition, some ranching projects have begun to raise sea turtles.113 At least one conservation group is active in sea turtle preservation, buying green turtle eggs that would otherwise be eaten and hatching the eggs in protected areas.114

ratified the Convention in late 1980, but because it reserved as to three sea turtle species, see note 105 supra, trade between the two countries may continue free of Article X's comparable documentation requirement. Mexico participated in the Plenipotentiary Conference, but has not yet ratified the Convention. 68 DEP'T STATE BULL. 613, 618 (1973); 43 Fed. Reg. 32,800, 32,807 (1978).

109. See text accompanying notes 81-82 supra.

110. For example, Ecuador, a member of the Convention since 1975, still exports many Appendix I sea turtles. See Sea Turtle Memo, supra note 105, at 4. One authority estimates that 200,000 olive ridleys were killed in Ecuador in 1978 and 1979. Letter from David Mack, supra note 5, at 2.


111. 50 C.F.R. § 17.11 (1979). The six species are the green, hawksbill, Atlantic ridley, leatherback, loggerhead, and olive ridley turtles. For a discussion of the protection offered by the Endangered Species Act, see notes 90-91 supra and accompanying text.

112. The Endangered Species Act automatically prohibits imports of species listed as endangered in 50 C.F.R. § 17.11 (1979). See note 91 supra. The hawksbill, Atlantic ridley, leatherback, and portions of the green and olive ridley turtle populations have been accorded endangered status. The Secretary has also imposed an import ban on those species or populations of sea turtles listed as threatened in 50 C.F.R. § 17.11 (1979). 50 C.F.R. §§ 227.4, 227.71 (1979). See note 91 supra for a discussion of the Secretary's authority to conserve threatened species.

113. Turtle ranches exist in the Grand Cayman Islands, Australia, Reunion Island, the Seychelles, South Yemen, Mexico, Malaysia, the Philippines, and Indonesia. Dodd, supra note 97, at 1. The Cayman Turtle Farm claims to be a true closed cycle farm. Grove, supra note 81, at 310. At least one expert rejects that characterization, however. Dodd, supra note 97, at 7.

In 1978, the Cayman Turtle Farm urged the U.S. government to exempt captive-bred sea turtle specimens from the proposed import ban. 43 Fed. Reg. 32,800, 32,804 (1978). The government denied the exception, stating that (1) such farms would only encourage increased demand for sea turtle products and thereby stimulate poaching, (2) mariculture operations such as the Cayman farm could not be monitored adequately, (3) such farms would probably not provide much useful scientific information regarding breeding and conservation, and (4) too little was known as to whether such farms could raise sea turtles under a closed cycle system. Id. at 32,804-05. See generally Dodd, note 97 supra. For the distinction between farms and ranches under the Convention, see note 139 infra.

On the international level, Convention members are trying to surmount smuggling and identification problems. As with the saltwater crocodile,\textsuperscript{115} exporters of endangered sea turtle products often falsely label the exports as those of a nonendangered species.\textsuperscript{116} At the 1981 New Delhi conference, the parties passed amendments upgrading certain nonthreatened turtle species to Appendix I status. This should curtail some of the identification problems.\textsuperscript{117}

III

PROPOSALS

Proposals intended to curb overuse of the reservation clauses should be considered in the context of the Convention's goals: conservation of endangered species, recognition of legitimate trade interests in wildlife, and universal participation in the Convention.\textsuperscript{118} Universal participation in the Convention would minimize the abuse involved in trade between reserving states and nonmembers. Parties reserving as to certain species would have no choice but to trade with other Convention members and hence would be forced to issue comparable documentation under Article X.\textsuperscript{119} The following proposals attempt to strike a balance between greater acceptance of the treaty and species preservation.

A. LIMITING THE USE OF THE RESERVATION CLAUSES

This Note proposes two types of limitations on the use of reservation clauses: the first limits the number of reservations that a party may enter; the second restricts a reservation's duration.\textsuperscript{120}

\textsuperscript{115} See text accompanying notes 94–96 supra.

\textsuperscript{116} For example, "Italy [has] exported large quantities of sea turtle products of the flatback sea turtle . . . . . . listing Mexico and Ecuador as its origin, South American river turtle \textit{Podocnemus expansa}, listing Mexico and Honduras as its origin, and Central American river turtle \textit{Dermatemyris mawii}, listing Mexico as its origin." Sea Turtle Memo. supra note 105, at 3. Yet the flatback sea turtle, listed in Appendix II before the 1981 conference, see note 117 infra, is found only in Australian waters. \textit{Id}. Similarly, the South American river turtle, an Appendix II species, does not inhabit Mexico and Honduras, the supposed countries of origin. \textit{Id}. Finally, Mexico exported more purported Central American river turtle meat in 1979 and 1980 to the United States than biologists believe exists in the entire world. \textit{Id}.

\textsuperscript{117} For example, until the 1981 conference, the entire green turtle species except the Australian population was listed in Appendix I. 50 C.F.R. § 23.23 (1979). The parties adopted Australia's proposal to meliorate its population to avoid false documentation problems. 46 Fed. Reg. 20,713, 20,714 (1981). The parties also upgraded the flatback turtle to Appendix I. \textit{Id}. Finally, the parties partially protected the Central American river turtle, previously unlisted, by placing it on the Appendix II list. \textit{Id}.

\textsuperscript{118} See notes 2 & 55–57 supra and accompanying text.

\textsuperscript{119} Convention, supra note 1, art. X. Trade between Convention members reserving as to the same species, however, is the exception. See text accompanying note 67 supra.

\textsuperscript{120} Of course, the two types of limitations could be combined.
Limiting the number of reservations that a state can enter would force states to make reservations concerning only those species most important to their economies. However, if the number is too low, it may discourage states from joining the Convention; if the number is too high, it may present essentially the same problems as those that exist under an unlimited reservation clause. Based on past practice, a limit of five reservations per country should be sufficient and serve to accommodate a state's economic interests as well as protect its endangered species.

Yet, even if the Convention limits the number of reservations each party can enter, countries may still enter reservations to the same few species. This multiple reservation situation is likely to exist where one particular species is important to the economies of several countries.

A second proposal involves limiting a reservation's duration. The time constraint would create incentives for the states to develop alternatives to the endangered species. If no substitute could be found, industries using endangered species would at least have time to reorganize so as to minimize the impact of an eventual reduction or prohibition of trade in that species. The Convention's protectionist goals, as well as the state's economic interests, would be furthered under this proposal since states could enter reservations for a limited time and later honor the Convention as a whole.

With or without these limitations, all reservations should be reviewed periodically. A change in market or manufacturing conditions could alter the need for certain reservations. The parties' biennial conference would be a logical time for this review to take place. In reviewing reservations, the parties should consider the current status of the species involved, the economic harm to reserving states, and the availability of substitutes for the species. Review at the conference would also focus public attention on the problem since environmental organizations may participate.

121. While most parties have entered no reservations, Switzerland has reserved as to 32 species: Canada, 13; Japan, 9; France, 7; South Africa, 5; the Soviet Union, 5; and Italy, 5. Five other states have entered one or two reservations. Reservations in force as of 1 January 1981, reprinted in New Delhi Proceedings, supra note 2, Doc. 3.22, at 2-6.

122. For example, five countries have entered reservations to the saltwater crocodile. See notes 74-76 supra and accompanying text. For discussion of the problems caused by matching reservations, see text accompanying notes 68-73 supra.

123. Currently, a reservation continues indefinitely. A party may withdraw a reservation at any time, however. Convention, supra note 1, arts. XV(3), XVI(2), XXIII(3).

124. See note 28 supra.

125. The Convention, supra note 1, art. XI(7), provides that "[a]ny body or agency technically qualified in protection, conservation or management of wild fauna and flora" may send observers to the conference. Observers may participate, but may not vote. Id.
These suggestions may be implemented either by a formal amendment to the Convention or by an informal recommendation of the parties. Both methods contain advantages and disadvantages. Amending the Convention involves an unwieldy and time-consuming procedure, requiring, among other things, an extraordinary meeting of the parties.\textsuperscript{126} Furthermore, states have discretion in accepting amendments,\textsuperscript{127} and those that have made great use of reservation clauses are unlikely to ratify an amendment limiting that option.\textsuperscript{128} The main advantage of the amendment process is that it would bind members who accept it and future members.

Recommendations appear to be the more politically acceptable means for implementing methods to limit the overuse of the reservation clauses.\textsuperscript{129} While the formal amendment approach may discourage current nonparties from signing the Convention,\textsuperscript{130} recommendations, because of their flexibility and lack of enforcibility, can avoid this problem. The advisory nature of a recommendation will not necessarily doom the proposals included therein to ineffectiveness since public opinion will provide some pressure on the parties to live up to the recommendations' standards.\textsuperscript{131}

The recommendation approach is particularly well suited for implementing the proposal for periodic review of reservations. At the 1981 New Delhi conference, the parties passed a resolution authorizing a ten-year review of the status of species listed in the appendices.\textsuperscript{132} A periodic review of reservation status is a natural...
B. Farming and Ranching

States are presently making efforts to raise certain endangered species in captivity, for trade purposes as well as to restock the wild population. The Papua New Guinea crocodile projects exemplify this effort. Carefully managed farms and ranches have several advantages. Besides encouraging the survival of endangered species, such projects are in the economic interest of exporting states. As animal and plant specimens increase in value, countries of origin may take greater care to protect the species from extinction. Farms and ranches may provide steadier and ecologically sounder employment for the local population. In addition, projects may assuage importing states’ concerns by providing a steady source of supply.

Farms and ranches also serve to encourage participation in the Convention. Article VII(4) allows commercial trade in Appendix I animal species that have been bred in captivity. In addition, a recommendation adopted at the 1981 conference allows commercial trade in a nation’s native population of an Appendix I species, if the parties jointly agree that ranches in that state meet criteria to ensure

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133 While such a recommendation would not bind a party to withdraw a reservation if the review found it to be unnecessary or unsound, the process would bring public pressure to bear on the reserving party. Again, the presence of environmental and conservation groups as observers at the conference would insure rigorous scrutiny. See note 125 supra.

134 For a discussion of the critical distinction between farming and ranching, see note 97 supra.


136 Ranching projects especially must be carefully managed to insure survival. Papua New Guinea’s program appears to work both because local ranches are carefully supervised and because of the existence of laws that protect the adult breeding population. See notes 89 & 98-100 supra and accompanying text.


138 Convention, supra note 1, art. VII(4). The provision provides that such specimens are to be treated as Appendix II specimens. Id.

The meaning of this exception was an issue at the 1971 conference of the parties. The U.S. delegation introduced a definition that would effectively limit the exception to closed cycle operations. The parties accepted the recommendation. I San José Proceedings, supra note 26, at 49-50 (Conf. 2.12: Specimens Bred in Captivity or Artificially Propagated). The parties, however, did not completely reject the idea of extending the exception to ranching. They referred the issue to the secretariat, who formed an ad hoc committee on ranching to study the issue. See New Delhi Proceedings, supra note 2, Doc. 3.13, Annex I. For a discussion of the committee’s recommendations and the results reached at the 1981 conference, see note 141 infra and accompanying text.
species preservation. These exceptions provide an incentive for countries of origin to ratify the Convention.

The farming approach is not a panacea, however, for the agreement's ills. First, farms and ranches are feasible for only a limited number of species. Second, local officials must manage such projects very carefully to avoid further threats to the world population of the species involved. Ranches, which continually replenish their stock from the wild, represent the greatest danger. Even farms, however, must start with specimens from the wild. Highly endangered species may be further endangered by initial stocking.

139 The recommendation downgrades a nation's native population of an Appendix I species to Appendix II, if, in the judgment of the parties, ranching operations in that state will not further endanger the local population or the species as a whole. New Delhi Proceedings, supra note 2, Com. 3.12 (adopted in id. Plen. 3.8, at 2-3); id. Com. 3.5, at 2. The parties are to consider numerous factors in evaluating a proposed transfer: the taking from the wild must have no significant detrimental impact on wild populations; adequate identification is necessary to distinguish readily native population specimens from other specimens; the management authority of the state must make its records available to the secretariat to assure that adequate safeguards are being taken; and, most important, the ranching operations "must be primarily beneficial to the conservation of the local population." Id. Com. 3.12, paras. (b)(i & ii), (c) (i & vi).

As adopted, the recommendation modified the ranching committee's original proposal to accept trade only in the ranched specimens of a local population. Id. Doc. 3.13, Annex 4, at 1 (Draft Resolution of the Conference of the Parties: Ranching of Appendix I Animals). The parties felt that expansion to include the entire population would not be detrimental, because of the expectation that the parties would require appropriate safeguards to protect the local population and the species. Id. Com. 3.5, at 2.

140. For example, Surinam stated that it entered a reservation to the green turtle because it might develop ranching operations. Id. Inf. 3.9, at 1 (Statement of Suriname on Its Accession to CITES). It also promised to withdraw its reservation when the parties agreed on a way to allow countries to establish ranching as a conservation method. Id. The inclusion of entire national populations of ranched species on Appendix II reflects this concern, the recommendation is designed to encourage countries who had entered reservations because of local ranching operations to withdraw those reservations. Id. Com. 3.5, at 1

141. The chairman of the ranching committee listed the following few species as possibly amenable to ranching: crocodiles, turtles, and perhaps some snakes, lizards, amphibians, fish; and insects. Id. Plen. 3.4, at 3. In addition, some experts question the biological and economic bases of already existing ranches. See, e.g., Ehrenfeld, Conserving the Edible Sea Turtle: Can Mariculture Help?, 62 AM. SCIENTIST 23, 24-31 (1974); Dodd, supra note 97, at 3-14. See also note 142 infra.

142. For example, one expert severely criticizes sea turtle ranching theory and practice, stating that commercial aquacultural operations "are based on false premises about the extent of biological knowledge of the species and about the applicability of the maximum sustainable yield concept," and that the assumption that the species' survival rate will increase by collecting "doomed" eggs, raising the hatchlings past the critical mortality period, and then releasing a portion back to the wild, is not supported in fact. Dodd, supra note 97, at 8, 14. The author concludes that, because aquaculture could stimulate the market, lead to a proliferation of projects with "no conservation outlook," and "spawn ill-conceived yet well publicized 'conservation' activities" that could mislead the consuming public into believing that sea turtles are recovering significantly, "sea turtle aquaculture can only be considered a threat to the survival of these endangered species." Id. at 14. But see New Delhi Proceedings, supra note 2, Doc. 3.13, Annex 2 (report of the ranching committee), para. 34, for a discussion of the advantages of ranching.
To minimize this impact, farms must start with smaller populations, postponing eventual profits.

A third and related problem is the issue of subsidies. It takes years to raise specimens to commercial size. Thus, farms and ranches require subsidies in their early years. To alleviate this problem, countries of origin should be encouraged to tax wildlife specimens exported under the Convention. Funds generated by such a tax could be used to finance farms, ranches, and general conservation measures. This approach would encourage exporters to bring as much wildlife trade as possible within the Convention to increase revenues from the tax. The tax, ultimately borne by the consumer, would also more accurately reflect the true costs of wildlife trade.

Fourth, distinguishing between two specimens of the same species, one captive-bred and the other wild, is presently impossible. The first step necessary in dealing with this problem is strict adherence to the Convention's documentation requirements. Another possible step would be to use special stamps to aid in identifying

143. Saltwater crocodiles must be raised about three years to reach commercial size, and the species does not begin to breed until 10 to 15 years old. Moitaka Report, supra note 94, at 4; R. Whitaker, supra note 82, at 22. Sea turtles take five to seven years to mature and only reproduce every two to four years. Ehrenfeld, supra note 141, at 24, 28.

144. For example, Papua New Guinea's crocodile ranches and farms currently receive monetary and technical support from their government and the United Nations. R. Whitaker, supra note 82, at 1; Joint Report, supra note 137, at 4; 44 Fed. Reg. 43,442, 43,443 (1979). The Cayman Turtle Farm exemplifies the high costs of ranching. The company has reportedly spent over 17 million dollars to date, and authorities still debate whether it represents a true closed cycle operation. Dodd, supra note 97, at 7.

145. The Papua New Guinea government already imposes a tax on crocodile skin exports. Joint Report, supra note 137, at 9. To be most effective and least cumbersome administratively, the tax should be a percentage of the export price rather than a set amount per specimen.

146. The income could help overcome the "reluctance on the part of governments to spend money on wildlife." Grove, supra note 81, at 305 (quoting Indian wildlife official). For example, income from the tax would allow more conservationists and park guards to be hired and trained. Id. (lack of funding for guards in Ecuador and Thailand).

147. Dodd, supra note 97, at 9-10. The distinction is crucial, however, because of the Convention's trade allowance for Appendix I species bred in captivity. See text accompanying note 138 supra.

The parties at the 1981 conference attempted to deal with the identification problem, at least for ranching, by incorporating a requirement that ranched products be "adequately identified" so that they are "readily distinguish[able] from products of Appendix I populations." New Delhi Proceedings, supra note 2, Com. 3.12, para. (b)(ii). See also id. Doc. 3.13, Annex 2, para. 36 (report of the ranching committee recommending that an indelible mark be used to identify ranched products).

148. The Convention's general documentation requirements are set forth in article VI. Convention, supra note 1, art. VI. While an effective permit system for raw specimens is difficult enough to devise and enforce, the task becomes impossible after specimens are cut and processed into finished goods. See Elephants: Hearings on H.R. 4685 Before the House Committee on Merchant Marine and Fisheries, 96th Cong., 1st Sess. 107 (1979) (statement of Ian Parker) [hereinafter cited as Elephant Hearings].
forged permits.\textsuperscript{149}

Finally, critics claim that farming and ranching projects are counterproductive in that they stimulate the current market and thereby encourage increased poaching.\textsuperscript{150} These critics feel that the only effective protection for endangered species is to eliminate the market.\textsuperscript{151}

In sum, farming and ranching can serve to preserve species and encourage wider participation in the Convention, thus partially curbing one aspect of the reservation clause problem: trade between reserving states and nonmembers.\textsuperscript{152} To achieve those goals, however, the costs of farming and ranching must be less than the costs associated with poaching and smuggling.\textsuperscript{153} Factors such as the amenability of the species to farming or ranching, the number of specimens able to be produced, the cost per specimen, the added demand generated by such operations, and identification problems must be carefully considered in deciding whether to pursue farming and ranching. Such projects should be encouraged only to the extent that they actually aid conservation as well as trade.\textsuperscript{154}

C. Economic Sanctions

States generally enter reservations for economic reasons.\textsuperscript{155} Consuming states should use their market position to exert pressure on reserving exporters and processors to withdraw their reservations. The Convention allows member states to adopt stricter regulations than those provided by the treaty.\textsuperscript{156} Individual states can thereby take the initiative to exclude products coming from reserving countries.\textsuperscript{157} A consuming state with a large percentage of the world market in a particular finished wildlife product could potentially be quite influential. A “counter cartel” of consuming states would be even more effective. In addition to the Convention’s prohibition

\textsuperscript{149} See note 87 supra.
\textsuperscript{150} Carr, supra note 101, at 34; Ehrenfeld, supra note 141, at 29; Dodd, supra note 97, at 4; see 43 Fed. Reg. 32,800, 32,804 (1978); Grove, supra note 81, at 305, 310, 313, 314.
\textsuperscript{151} See, e.g., Bolton, supra note 97, at 369 (Editor’s note); Carr, supra note 101, at 34; Dodd, supra note 97, at 14.
\textsuperscript{152} See text accompanying note 67 supra.
\textsuperscript{153} See Ehrenfeld, supra note 141, at 30.
\textsuperscript{154} Farming is preferred to ranching because of the latter’s dangerous reliance on wild populations for its stock, which may further contribute to a species’ extinction. The parties addressed that concern at the 1981 conference by mandating that ranching operations be “primarily beneficial to the conservation of the local population” as one requirement before ranched products of Appendix I species may be traded commercially. New Delhi Proceedings, supra note 2, Com. 3.12, para. (b)(i) (emphasis added).
\textsuperscript{155} See note 50 supra.
\textsuperscript{156} Convention, supra note 1, art. XIV(1).
\textsuperscript{157} The United States has not adopted this approach expressly, but its import ban on any endangered species accomplishes the same result. See note 91 supra.
against imports of Appendix I specimens,\textsuperscript{158} major consuming states could increase economic pressure on reserving parties by extending the import ban to related nonendangered species as well.\textsuperscript{159} Wildlife processing industries in reserving countries would then find it in their economic interest to have their governments withdraw the reservations and allow restricted trade under the Convention\textsuperscript{160} rather than suffer a total loss of trade in the species involved.

Two conditions must be met in order to effectuate this proposal. First, a significant portion of the consuming market must join in the ban. Lost trade due to the boycott should be greater than the difference between present trade outside the Convention and trade under the Convention's restrictions for a processing industry to prefer the latter alternative. This amount will vary from species to species, depending on the extent of available substitutes and specimens bred in captivity.\textsuperscript{161} Second, a substantial lack of identity between the producing and consuming countries is necessary. A trade ban by outside states will be ineffective against a producing industry that either already sells most of its finished products from the reserved species in its domestic market or can substitute the domestic market for its lost exports.\textsuperscript{162}

Import bans reflect a consumer state's desire not to be responsible for a species' extinction. Exporting states, however, may feel that such unilateral bans fail to take into account the legitimate interests of the exporting state.\textsuperscript{163} Total import bans may, for example, conflict with an exporting state's desire to develop farming projects.\textsuperscript{164}

\textsuperscript{158} See New Delhi Proceedings, supra note 2, Doc. 3.22, at 7 ("No... Party may accept Appendix I specimens from a Party having reserved on the species concerned.").

\textsuperscript{159} For example, the ban should extend to reservations to all crocodile and alligator species because of the problem in distinguishing hides of an endangered crocodile species from those of a nonprotected species. See notes 93-95 supra and accompanying text.

\textsuperscript{160} Processors could still trade in nontargeted species, Appendix II species, see text accompanying note 22 supra, and specimens bred in captivity, see note 138 supra and accompanying text. For example, the Convention currently allows trade in 16 of the 28 crocodilian species. See note 94 supra. Initially, however, the supply will be restricted, especially if few farms exist.

\textsuperscript{161} Id.

\textsuperscript{162} Here, a boycott by local consumers against local processors and retailers would be necessary to substitute for an external trade ban. Given the current decline in social pressure to avoid use of wildlife products, an effective internal consumer boycott may be difficult to accomplish. See Mohr, note 93 supra.

\textsuperscript{163} In testimony before a congressional committee considering a proposed import ban on ivory trade, one authority urged Congress not to take any action without first consulting African governments. Elephant Hearings, supra note 148, at 80 (statement of Dr. Iain Douglas-Hamilton); see also id. at 104 (statement of Ian Parker urging Congress to work through the Convention rather than take unilateral action that, because of ignorance, could "produce a countereffect to that which it is hoped to do.").

\textsuperscript{164} In an analogous situation, the U.S. government rejected a commercial mariculture operation's request for an exemption from the U.S. trade ban on sea turtles. See
These competing interests must be balanced, yet without discouraging cooperation under the treaty.

D. PUBLIC OPINION

A similar and complementary solution to the economic pressure proposal is the use of adverse publicity.165

At the 1981 conference, the parties decided to require members to include trade figures in reserved species in their annual reports.166 With this trade data, conservationists will be better equipped to use public pressure in persuading states167 and industries168 to take an official stand against wildlife exploitation. Such pressure could be particularly effective in the United States and Europe, where environmental groups are active. Public opinion can be especially influential at the parties' biennial conferences, because of the Convention's unusual rules that allow qualified nongovernmental observers to participate in debates and proceedings.169 At the 1979 San José, Costa Rica Conference, these observers were credited with playing a role in obtaining the approval of restrictions on whale trade and defeating proposals by various states to ease restrictions on certain species of wildlife.170

CONCLUSION

Multiple use of the Convention's reservation clauses remains the major obstacle to full effectuation of the agreement. The threats to the saltwater crocodile and sea turtles illustrate the power of eco-

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165. "Perhaps the most important aspect of enforcement, still largely neglected, is public information as a means to induce voluntary compliance." Sand, supra note 2, at 88.

166. Letter from David Mack, supra note 5.

167. Public outrage over abuses in the ivory trade recently convinced Congress to consider a six-month moratorium on ivory imports into the United States. H.R. 4685, 96th Cong., 1st Sess. §§ 4 (1979), reprinted in Elephant Hearings, supra note 148, at 4-5. See id. at 81 ("[t]he elephant's decline] has now become a great emotional issue in the United States . . . [Two congressmen on the committee] received . . . approximately 4,000 letters and cards ranging from 9- and 10-year-old schoolchildren to 75-year-old grandmothers."). Editor's note, NAT'L GEOGRAPHIC 285 (March 1981) (stating that, in response to an earlier article about the elephant's decline, thousands of readers sent contributions to the World Wildlife Fund's special elephant collection, including a 102,000 dollar airplane). Despite this pressure, the bill died in the Senate, perhaps because of testimony that, in light of the United States' small portion of the world ivory market, unilateral action would be ineffective. See Elephant Hearings, supra note 148, at 54-55, 104, 115.

168. "In most developed countries public pressure has forced spotted-cat furs off shop displays and, often, off the streets. Major showrooms in Paris have agreed to stop creating coats made from endangered species." Grove, supra 81, at 305.

169. See note 125 supra.

nomics to ride roughshod over preservation. Proposals to limit use of the Convention's reservation clauses, to encourage farming, and to put pressure on reserving countries through economic sanctions and public opinion have been evaluated for their effectiveness in balancing universal participation in the agreement, conservation, and legitimate trade interests. Each proposal contains some flaws; no single suggestion is likely to prevent overuse of the reservation clauses. This complex problem demands a multifaceted solution. Convention members and concerned individuals and groups should work on all fronts to curb abuse of the reservation clauses.

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