



AMERICAN ENTERPRISE INSTITUTE
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**“Endangered Species at Home and Abroad: International
Application of the ESA and the Interaction of the ESA and
CITES”**

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Draft: Please do not cite without permission from the author.

Prepared for the American Enterprise Institute conference,
“Rebuilding the Ark: New Perspectives on ESA Reform,”
September 15, 2009

The collected papers for this conference can be found at www.aei.org/event/100128



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Endangered Species at Home and Abroad: International Application of the ESA and the Interaction of the ESA and CITES

By Michael De Alessi

While the federal Endangered Species Act provides for the legal protection of endangered species within the United States, international protection for endangered species rests primarily with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The ESA and CITES share a common history. Both came into force in 1973, and both have been both widely praised and pilloried for decades.

Both the ESA and CITES take a single-species approach to endangered species protection that relies heavily on restrictions and putative measures. Measuring their success is notoriously difficult. Advocates proclaim that both the ESA and CITES successfully prevent extinction, while critics cite the lack of recovery and removal of species from endangered status as proof of failure. Like the ESA, CITES also suffers criticism for its reliance on protective measures that, at least in some cases, also create incentives that undermine the goal of species protection and recovery.

The ESA and CITES share a direct lineage to earlier endangered species legislation in the U.S., and the ESA's endangered species list includes a significant number of foreign species, most but not all of which are also listed by CITES. These foreign listings under the ESA ban the importation of those species or their products, but do not automatically trigger any other responses. Many ESA listings of foreign species likely affect international perceptions of species in danger, and also allow the U.S. Department of the Interior to fund international conservation efforts, at its own discretion. Despite the fact that the same agencies responsible for the management of endangered species under the ESA, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, are also responsible for CITES-related analyses and recommendations, the process for listing species under CITES and the ESA are wholly separate. ESA listings are largely administrative, while CITES listings are subject to a vote of all of the signatories, taken when they meet at Conferences of the Parties held every 2-3 years. Given their interwoven histories and current management within the U.S., however, significant reform of the ESA would almost certainly wend its way into reform within CITES as well.

As the particulars of the ESA are covered by other chapters in this volume, this chapter will examine the relationship of the ESA to CITES, the similar trajectories they have followed and the criticisms they have engendered. Case studies of elephants, rhinoceros, sea turtles, crocodiles, and a failed for-profit conservation effort in Australia will show some of the complexities and problems endemic to the CITES approach, and the chapter will conclude with the potential for ESA reform to have a positive affect on international species protection.

Threats to Endangered Species

The greatest threat to the survival of endangered and threatened species is habitat loss.¹ Numerous studies have tried to quantify threats to extinction of species, and exploitation usually comes in third, behind habitat loss and invasive species. A 1992 global assessment, for example, surveyed known animal extinctions and found that exploitation was responsible for 23 percent of extinctions, while introduced animals accounted for 39 percent and habitat loss for 36 percent². In 2004, the International Union for the Conservation of Nature (IUCN, an intergovernmental and NGO conservation organization), noted in its worldwide review of endangered species that habitat loss and degradation affect 85-90 percent of threatened and endangered mammals, birds, and amphibians³. The farthest-reaching governmental efforts to protect endangered species such as the ESA and CITES, however, were created to focus on curbing exploitation or “take”, presumably because its effects were and are more readily apparent than habitat loss, and its cure seemingly more straightforward.

CITES

In the early 1960s, the significance of trade in the depletion of species spurred the International Union for the Conservation of Nature (IUCN, an intergovernmental and NGO conservation organization) to pass a resolution at its 1963 meeting calling for the international regulation of trade in endangered species.⁴ At the same time, IUCN also created its Red List of endangered species. Still prominent in international conservation circles today, the Red List was no doubt an inspiration for the first official list of endangered species in the U.S., published by the U.S. Fish and Wildlife Service (USFWS) in 1967⁵. Seventy-eight species were listed as endangered, but inclusion on the list did not trigger any protective measures. To add some teeth to the list, Congress enacted the Endangered Species Conservation Act of 1969⁶, which prohibited the import or export of species officially listed by the USFWS as endangered, and also called for the negotiation of an international treaty regulating trade in wildlife and wildlife products.⁷ As a result, a meeting was held in Washington, DC in 1973 which resulted in the Convention on International Trade in Endangered Species of Wild Fauna and Flora, or CITES.

The U.S. was one of the first nations to sign onto CITES, which came into force in 1975. CITES regulates the international trade of animals and plants by placing endangered and threatened species into three Appendices with varying degrees of trade

¹ M. Hoffmann, T. M. Brooks, G.A.B. da Fonseca, C. Gascon, A.F.A. Hawkins, R.E. James, P. Langhammer, R.A. Mittermeier, J.D. Pilgrim, A.S.L. Rodrigues, and J.M.C. Silva, “Conservation planning and the IUCN Red List,” *Endangered Species Research* (May 7, 2008), pp. 1-13.

² B. Groombridge (ed.), *Global Biodiversity: Status of the Earth's Living Resources*, New York: Chapman and Hall (1992).

³ J. Baillie, L.A. Bennun, T.M. Brooks, S. Butchart, and others, *2004 IUCN Red List of Threatened Species. A Global Species Assessment*, Gland and Cambridge: IUCN (2004).

⁴ Carlo A. Balistreri, “CITES: The ESA and International Trade,” *Natural Resources & Environment* 8, (Summer 1993), p. 33.

⁵ “Endangered Species.” *Federal Register* 32:48 (11 March 1967), p. 6.

⁶ Pub. L. No. 91-135, 83 Stat. 275 (1969).

⁷ Michael J. Bean, “The Endangered Species Act: Science, Policy, and Politics,” *Annals of the New York Academy of Sciences* 1162, (2009): 370.

restriction.⁸ Appendix I prohibits commercial trade in species threatened with extinction. Appendix II contains species that are threatened or whose populations are declining toward threatened status. It does not impose trade restrictions on those species, but does require permits for import and export. Appendix III listing only requires increased monitoring of trade; no permits are needed for international trade. Inclusion in Appendices I and II are voted on at Conferences of the Parties, while any member may state add species to Appendix III at any time. By 2008 the three CITES Appendices contained approximately 28,000 species of plants and 5,000 species of animals, of which over 600 animals and almost 300 species of plants were included in Appendix I⁹. As of 2009, there are 175 parties to the convention, making it one of the most widely ratified international treaties.¹⁰

Foreign Species on the Federal Endangered Species List

The original 1967 list of endangered species contained only species native to the United States. With the 1969 legislation, however, foreign species were added to the list and import and export restrictions were imposed on all species on the list. The Endangered Species Act of 1973 was passed after the U.S. had signed onto CITES, and it shifted U.S. endangered species legislation from regulating international trade to protecting domestic species, particularly by regulating the broadly defined “take” of listed species. The ESA remained closely aligned with CITES, however, as it became the legal enforcement mechanism for CITES restrictions on trade, and also continued to list foreign species as endangered. When the ESA was passed in 1973, it made the Secretary of the Interior, through the U.S. Fish and Wildlife Service, responsible for enforcing CITES in the U.S. In practice, this means that the USFWS reviews and issues import and export permits, works directly with US Customs on enforcement, and is the primary agency responsible for scientific assessments and advocacy of U.S. positions at conferences of the parties to CITES¹¹.

Today half of the 1,171 animals listed as threatened or endangered under the Endangered Species Act are considered “foreign” by the USFWS, but only 3 foreign plants are listed¹². There is significant overlap between the foreign species listed on the ESA and the CITES Appendices. Initially, ESA listed foreign species were a holdover from the legislation predating CITES, but today ESA foreign listings are more broad than CITES because they may include species *not* threatened by trade, whereas CITES listings primarily consider the effects of trade. In addition, foreign listing under the ESA may provide funding for international conservation efforts. Section 8 of the ESA, “as a demonstration of the commitment of the United States to the worldwide protection of endangered species and threatened species”, authorizes the use of funds and personnel to assist in “the development and management of programs” in foreign countries “necessary

⁸ Pervaze A. Sheikh and M. Lynne Corn, “The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Background and Issues,” *CRS Report for Congress RL32751*, Washington, DC: Congressional Research Service, February 5, 2008.

⁹ CITES Secretariat, http://www.cites.org/eng/disc/number_species.pdf

¹⁰ CITES Secretariat, http://www.cites.org/eng/disc/number_species.pdf

¹¹ United States Government Accountability Office, “Protected Species: International Convention and U.S. Laws Protect Species Differently,” GAO-04-964 (September 2004).

¹² US Fish and Wildlife Service, “Summary of Listed Species Listed Populations and Recovery Plans” downloaded from http://ecos.fws.gov/tess_public/TESSBoxscore July 9, 2009.

or useful for the conservation of any endangered species or threatened species listed” under the ESA¹³.

It also appears that ESA listing of foreign species is important symbolically. In 2006, for example, the Center for Biological Diversity sued the USFWS over its failure to list 56 endangered birds from around the world.¹⁴ In 2009, the USFWS settled the case, agreeing to list 31 bird species.¹⁵ Of those 31 species, only 3 were already listed by CITES (one in each Appendix), and had been since the 1980s.¹⁶ While most of these species are critically endangered, the non-CITES listed species among them do not appear to be threatened by trade, confirmed by a Center for Biological Diversity spokesperson who stated in a release that the importance of the listing of these foreign birds is “increased international recognition of those species' urgent plights.”¹⁷

Of all of those foreign animals listed as endangered, only six have been removed and officially listed as recovered by the USFWS¹⁸. Three are Australian kangaroos, which were never endangered but considered threatened by the USFWS because of inadequate monitoring of trade in their hides and meat¹⁹. The other three are bird species from Palau which were endangered after military operations during WWII, but which have since recovered to close to their original population numbers²⁰. Four other foreign species have been downlisted from endangered to threatened, the red lechwe (an African antelope species), two crocodile species, the Nile crocodile and the Australian saltwater crocodile²¹, and the yacare caiman (a species similar to a crocodile)²². One more species, the Indian flap-shelled turtle, was removed from the list due to data error (it was determined that the species was not endangered or threatened after all)²³.

In each of these cases, the ESA has had no apparent affect on international conservation efforts. In the case of the kangaroos, ESA listing almost certainly spurred Australia to publish better data on markets for kangaroo products, but interestingly, none of the truly endangered species of kangaroo (such as the woylie, Australia's smallest and rarest kangaroo, and the bridled nail-tailed wallaby) were listed, only those with a

¹³ Endangered Species Act of 1973, Public Law No. 93-205, amended at 16 U.S.C. §§. 1531-1543.

¹⁴ Center for Biological Diversity press release, “Center Seeks Protection for 56 Vanishing Birds and Five Imperiled Butterflies Around the World,” (November 16, 2006), downloaded from http://www.biologicaldiversity.org/news/press_releases/56-birds-butterflies-11-16-2006.html July 10, 2009.

¹⁵ Environment News Service, “31 Rare Birds From Around the World Protected Under U.S. Law,” (June 16, 2009), downloaded from <http://www.ens-newswire.com/ens/jun2009/2009-06-16-092.asp> July 10, 2009.

¹⁶ Information gathered from the *CITES-listed species database*, <http://www.cites.org/eng/resources/species.html> (July 10, 2009).

¹⁷ Environment News Service, “31 Rare Birds From Around the World Protected Under U.S. Law,” (June 16, 2009), downloaded from <http://www.ens-newswire.com/ens/jun2009/2009-06-16-092.asp> July 10, 2009.

¹⁸ USFWS, “delisting report,” (2009) downloaded from http://ecos.fws.gov/tess_public/DelistingReport.do, July 9, 2009.

¹⁹ Robert J. Noecker, “Endangered Species List Revisions: A Summary of Delisting and Downlisting,” *CRS Report for Congress 98-32*, Washington, DC: Congressional Research Service, January 5, 1998.

²⁰ Robert J. Noecker

²¹ CRS Report 98-32.

²² USFWS, “yacare caiman,” downloaded from <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C004> July 14, 2009.

²³ CRS Report 98-32.

commercial trade in their hides. So the ESA followed the CITES model in this case, ignoring the most endangered species because their products were not exported, and focusing on what turned out to be a sustainably harvested species. For the red lechwe, the USFWS simply followed the lead of CITES, removing the species after it was downlisted from CITES Appendix I to Appendix II in 1979. In the cases of the Nile and the Australian saltwater crocodile, ESA downlisting was a response to successful ranching programs, and in the case of the yacare caiman, to concur with the CITES listing under Appendix II and “to promote the conservation of the yacare caiman by ensuring proper management of the commercially harvested caiman species”,²⁴.

ESA listing of foreign species may also have detrimental effects on conservation when the ESA lags behind CITES efforts to allow well-regulated trade. Such was the case with the Nile crocodile, which the U.S. listed as endangered in 1970, and was on Appendix I of CITES when it came into force in 1975. In 1983, however, CITES moved the Zimbabwe population of Nile crocodiles to Appendix II to allow for commercial ranching operations to have a market, and added the crocodile populations of nine other African countries in 1985. These moves were supported by the IUCN Crocodile Specialist Group as a likely means of propagating the species²⁵. The U.S. did reclassify the ranched Zimbabwean populations of Nile crocodile from endangered to threatened status in 1987 (and downlisted the wild population in 1988), but the rest of the Appendix II populations were not reclassified until 1993. Due to USFWS procedural issues, trade was not allowed into the United States, even in the Zimbabwe case, until 1996²⁶.

The commercialization of the Nile crocodile appears to have been a great conservation success story, and there is little doubt that the species has rebounded in countries with ranching programs. In recent years, CITES proposals for increased trade from countries with ranching operations like Botswana, Madagascar, and Malawi, have all been accepted²⁷. Ex-ante, the Nile crocodile case highlights an important difference between CITES and the ESA on international trade. CITES allows for the trade (and downlisting to Appendix II) of threatened and endangered species if it can be shown that trade is *not detrimental* to the survival of the species. The ESA, on the other hand, requires that permits to import threatened and endangered species will only be issued when it can be demonstrated that trade will result in *enhancing the survival* of the species²⁸. This distinction creates a different burden of proof, and makes experimentation significantly more difficult.

This distinction may be especially detrimental to ranching and captive breeding programs that are either within the United States or rely on transshipment through the United States. A recent court case, for example, found that USFWS was in violation of

²⁴ “Reclassification of Yacare Caiman in South America From Endangered to Threatened, and the Listing of Two Other Caiman Species as Threatened by Reason of Similarity of Appearance,” 65 Federal Register 87 (May 4, 2000), pp. 25867-25881.

²⁵ Jon Hutton, “Who Knows Best? Controversy over Unilateral Stricter Domestic Measures,” in Jon Hutton and Barnabus Dickson (Eds.), *Endangered Species Threatened Convention: The Past, Present and Future of CITES*, London: Earthscan, 2000, pp. 57-66.

²⁶ Hutton 2000.

²⁷ Grahame Webb, “Are All Species Equal? A Comparative Assessment,” in Jon Hutton and Barnabus Dickson (Eds.), *Endangered Species Threatened Convention: The Past, Present and Future of CITES*, London: Earthscan, (2000), pp. 98-106.

²⁸ Pervaze A. Sheikh and M. Lynne Corn (2008), p. 11.

the ESA when it issued an export permit for the captive breeders of three African antelope species, the scimitar-horned oryx, the addax, and the dama gazelle, which are endangered in their native ranges²⁹. The case repeatedly cited the enhancement standard as key to its findings that while a permit could legally be issued to an individual farm or breeder, no blanket permits could be issued. Similarly, in the case of the Cayman Turtle Farm (discussed below), the higher standard of the ESA prevented shipment of turtle products through U.S. ports, seriously undermining the breeding program of the turtle farm³⁰, which, if successful, may have matched the conservation success of the farming and ranching of the Nile crocodile³¹.

ESA foreign listed species and the WTO

The listing of foreign species under the ESA currently bans their import into and export from the United States regardless of whether a species is also listed on CITES Appendix I. That may soon change, however, the WTO has already repudiated two previous U.S. efforts to unilaterally impose trade restrictions. The first of these came in 1991, when Mexico won a GATT ruling against a U.S. effort to impose a trade ban against Mexican tuna because those tuna were not caught using the same dolphin safe methods that the U.S. had imposed on its tuna fleet under the aegis of the U.S. Marine Mammal Protection Act.³² In the second case, the WTO ruled in 1998 against U.S. efforts to restrict imports of shrimp from some Asian countries that were not caught in ways that protected sea turtles³³. The U.S. rationale for this restriction was that every species of marine turtle affected by shrimping was listed as endangered under the ESA³⁴.

The tuna-dolphin episode appeared to end with the GATT ruling, but in the turtle case, a U.S. appeal of the decision was ultimately successful. In 2001, after the U.S. applied its policy evenly to all shrimp imports and made other changes to satisfy the WTO that restrictions were about protecting turtles and not the U.S. shrimping industry, the WTO accepted the trade restriction³⁵. In both the original 1998 ruling and the successful 2001 appeal, the WTO explicitly underscored the importance of the listing of all of the relevant marine turtle species on Appendix I of CITES to the legitimacy of the U.S. trade restriction³⁶. In the case of non-endangered dolphins, which were not listed by CITES, no such appeal was pursued.

Despite the eventual success of an ESA-based trade restriction on a listed foreign species, the fact that the species were also listed on CITES Appendix I appears to have

²⁹ US District Court for the District of Columbia, *Friends of Animals et al v. Ken Salazar, Secretary of the Interior, and Rebecca Ann Cary et al v. Rowan Gould, Acting Director, Fish and Wildlife Service et al.*

³⁰ Robert J. Smith, "Private Solutions to Conservation Problems," in Tyler Cowen, ed., *The Theory of Market Failure: A Critical Examination*, Fairfax, Virginia: George Mason University Press (1988), pp. 341-360.

³¹ Webb 2000.

³² GATT, "United States—Restrictions on Imports of Tuna," June 16, 1994.

³³ WTO, "United States – Import Prohibition of Certain Shrimp and Shrimp Products WT/DS58/R," (May 15, 1998).

³⁴ Gregory Shaffer, "United States-Import Prohibition of Certain Shrimp and Shrimp Products. WTO Doc. WT/DS58/AB/R," *The American Journal of International Law*, Vol. 93, No. 2 (Apr., 1999), pp. 507-514.

³⁵ WTO, "United States – Import Prohibition of Certain Shrimp and Shrimp Products WT/DS58/RW," (June 15, 2001), p. 2.

³⁶ Elizabeth R. DeSombre and J. Samuel Barkin, "Turtles and Trade: The WTO's Acceptance of Environmental Trade Restrictions," *Global Environmental Politics*, Vol 2, no. 1, (February 2002).

been a crucial factor in the WTO's acceptance of the trade restriction. The turtle case was also a special one because it aimed to protect turtles indirectly, not by banning imports of turtles or turtle products (which CITES already covered), but by altering fishing methods for shrimp that might adversely affect turtle populations. As a result, special legislation apart from the ESA was required to implement the trade restrictions on shrimp³⁷.

There is a real question about the efficacy of listing foreign species under the ESA. The six foreign listed species that have been officially classified as recovered were not saved by their ESA listing, and the most notable application of U.S. endangered species policy abroad, to protect sea turtles, required its own special legislative action. And the WTO, which eventually sanctioned U.S. turtle policy, has explicitly stated its belief that multilateral environmental agreements such as CITES are "the most effective way to deal with international environmental problems"³⁸. Of course, CITES and the WTO have their critics too, some of whom make the reasonable claim that difficulties of monitoring compliance in other countries renders the protection of turtles in other countries toothless³⁹. And harsher critics believe that CITES is not only toothless, but detrimental to many conservation efforts, as in the case of the aforementioned antelope species captively bred in the United States but banned from export.

Limits to the effectiveness of CITES

The relationship of trade to conservation lies at the heart of a fundamental contradiction in the CITES approach to protecting endangered species; one that is similar to a critique of the ESA seen elsewhere in this volume. That is, the incentive structure it creates is primarily a negative one. It is certainly true that by successfully restricting trade in certain species, those species will in turn have less value on the marketplace, and so less effort will be spent hunting or harvesting them. This approach is especially well-suited to state managed lands and preserves, which are already being managed for conservation and where reducing the rewards to poaching and corruption will likely have positive effects. On communal or private land, however, devaluing species reduces the rewards to successfully protecting or propagating those species, and may hasten the conversion of land to other uses such as agriculture, or at the very least reduce interest in providing wildlife habitat.

The CITES approach is further undermined by the fact that the greatest threat facing the conservation of endangered species worldwide is not trade, but habitat loss and degradation⁴⁰. By the nature of solely being able to restrict international trade, however, CITES is effectively powerless to evince habitat protection. As noted in a popular press book about orchids, there is nothing in CITES to prevent those who would "flood habitat with a hydroelectric dam, log it, level the hillsides of a road, build a golf course on the

³⁷ "Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations," 64 Federal Register 130 (July 8, 1999), pp. 36946 – 36952.

³⁸ World Trade Organization, "understanding the WTO: the environment: a specific concern" downloaded from http://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm, July 8, 2009.

³⁹ Lori Wallach and Patrick Woodall, *Whose Trade Organization? A Comprehensive Guide to the WTO*, New York: The New Press (2004).

⁴⁰ See Hoffman et al, 2008, Ballie et al 2004, and Groombridge 1992.

site, or burn the jungle to the ground for agricultural purposes”⁴¹. There is also nothing CITES can do to prevent internal markets from operating. Internal markets may not be important in small countries, but in places like China, where CITES trade bans have done little to decrease demand for animals parts used in traditional Chinese medicine, they are a thorn in the side of CITES efforts. For example, despite the listing of tigers on Appendix I of CITES and loud claims from a number of NGOs that farmed tiger parts will be indistinguishable from illegally caught wild tiger parts, tiger farms are booming in China⁴². Currently, Chinese law prohibits any trade in tiger parts, but China has submitted requests to CITES to downlist farmed tigers, and the numbers of both farms and the tigers in them are growing rapidly, up to 4,000 tigers by 2007⁴³.

Finally, devaluing species and limiting their trade may not only compromise efforts by landholders and legitimate entrepreneurs, it has also in some cases limited the budgets of state wildlife agencies (discussed in further detail in the elephant and rhino examples below).

Both the ESA and CITES have explicitly recognized these problems, and attempted to compromise with varying degrees of success. The Safe Harbor program (see chapter TKTK) of the ESA recognizes the negative incentives that ESA critical habitat designations may have on private land, while CITES distinguishes between discrete populations of some plants and animals in some cases. The problem is, distinguishing between CITES-legitimated products and CITES-trade-banned products is extremely difficult or expensive, which in many developing countries is a functional equivalent. Hence the widespread opposition to tiger farms in China.

Measuring success

Both the ESA’s land use restrictions and CITES trade bans have their merits, but they are antithetical to conservation through commerce, which also has its merits. And while it seems like it should be possible to apply a simple metric of success such as increased or decreased population estimates or species either recovered or downlisted from endangered, the fact of the matter is that performance measurement is notoriously difficult in these cases. Species may be kept on endangered lists even after their numbers have returned because of the research funding and attention they bring, or in the case of the ESA to the indirect habitat protection they bring. Downlisting also requires an evaluation of what effect the removal of ESA (or CITES) protection will have, which by its nature must be conjectural⁴⁴.

In the case of the ESA, Congressional critics cite the paucity of officially recovered species as evidence of the Act to meet its goals⁴⁵, while others have calculated

⁴¹ Eric Hansen, *Orchid Fever: A Horticultural Tale of Love, Lust, and Lunacy*, New York: Vintage Books, (2001), p. 17.

⁴² Eric Dinerstein, Colby Loucks, Eric Wikramanayake, Joshua Ginsberg, Eric Sanderson, Josh Seidensticker, Jessica Forrest, Gosia Bryja, Andrea Heydlauff, Sybille Klenzendorf, Peter Leimgruber, Judy Mills, Timothy G. O’Brien, Mahendra Shrestha, Ross Simons, and Melissa Songer, “the Fate of Wild Tigers,” *Bioscience*, Vol. 57 No. 6, (June 2007).

⁴³ Dinerstein et al, 2007.

⁴⁴ Holly Doremus and Joel E. Pagel, “Why Listing May Be Forever: Perspectives under the U.S. Endangered Species Act,” *Conservation Biology*, Vol 15, No. 5, (October 2001), pp. 1258-1268.

⁴⁵ Richard Pombo, “The ESA at 30: Time for Congress to Update and Strengthen the Law,” Committee Report, US House of Representatives Committee on Resources, (2004), downloaded from

that by 1999 the ESA had prevented up to 192 species from going extinct⁴⁶. Others have suggested a more reasonable middle-ground measurement of trajectory, that is whether populations of protected species are increasing, decreasing or static⁴⁷. By this approach one study found that over 14 years, just over half of listed species were either improving or at least not declining; the USFWS, however, does not have adequate data to apply this criteria to over 40 percent of listed species⁴⁸.

The same applies to CITES. On the thirtieth anniversary of CITES, a UNEP press release pointedly cited two (and only two) examples of species recovered under CITES, the South American vicuña (a small member of the camel family) and the Nile crocodile⁴⁹. Highlighting the recovery of the vicuña and the Nile crocodile not only underscores the small numbers of CITES-listed species recoveries, it also highlights the importance of commercially driven captive breeding programs, which drove the recovery of both species⁵⁰. In an opening address to a CITES meeting in Chile, Jaime Quiroga, the Chilean Agriculture Minister, proclaimed that the effectiveness of CITES was “demonstrated by the fact that no species covered by CITES has yet become extinct.”⁵¹ A recent U.S. General Accounting Office review of international wildlife protection, however, stated that “it is difficult to directly link protections provided under the Convention to improvements in a species’ status in the wild.”⁵²

This basically leaves case studies to evaluate the effectiveness of CITES and the conflicts between endangered species viewed as either assets or liabilities. For the brief case studies of well-known, charismatic species below, at least, it appears that the costs of viewing species as liabilities are significant.

Elephants

Every few years the debate at CITES between those who believe that increasing the value of species through trade and those who believe that devaluing species by banning their trade is the way to rescue endangered species crystallizes around the African elephant. When CITES moved all Africa elephant populations to Appendix I in 1989, all trade in elephants and elephant parts was banned, despite the fact that populations were not-endangered in a number of southern African countries.

<http://republicans.resourcescommittee.house.gov/archives/ii00/issues/more/esa/whitepaper.htm> July 2, 2009.

⁴⁶ Mark W. Schwartz, “Choosing the Appropriate Scale of Reserves for Conservation,” *Annual Review of Ecology and Systematics*, vol 30, (1999), pp. 83–108.

⁴⁷ Timothy D. Male and Michael J. Bean, “Measuring progress in US endangered species conservation,” *Ecology Letters*, Vol 8, (2005), pp. 986–992.

⁴⁸ Male and Bean

⁴⁹ UNEP, “Wildlife Treaty Comes of Age -- Cites Celebrates 30 Years of Achievement,” (July 1, 2005), downloaded from <http://www.unis.unvienna.org/unis/pressrels/2005/envdev865.html> June 28, 2009.

⁵⁰ See Webb 2000 and Desmond McNeill, Gabriela Lichtenstein, and Nadine Renaudeau d’Arc, “International Policies and National Legislation Concerning Vicuña Conservation and Exploitation,” in I. Gordon (ed), *The Vicuña: the Theory and Practice of Community Based Wildlife Management*, New York: Springer Verlag (2009), pp. 63-79.

⁵¹ Jaime Campos Quiroga, “Opening Address to the Conference of the Parties,” CITES COP 12, Santiago, Chile (November 3, 2002), downloaded from http://www.cites.org/eng/cop/12/chile_open.shtml July 13, 2009.

⁵² United States Government Accountability Office, “Protected Species: International Convention and U.S. Laws Protect Wildlife Differently,” GAO-04-964, (September 2004), p. 12.

Despite dwindling elephant populations in some countries in Africa, other countries, especially in southern Africa, have the opposite problem. Again, habitat is an important part of the problem, as elephants historically roamed far and wide but human settlement now often forces them to stay in more defined areas where large populations can wreak ecological havoc. Chobe National Park in Botswana, for example, resembles a moonscape in some areas due to elephant overpopulation. Before the ban, ivory was sold by a number of southern African countries to raise money for the activities of their wildlife departments, which even included culling in some cases.

With promises that funds would go to wildlife management and community development, in 2003 Botswana, Namibia and South Africa were granted permission by the parties to CITES for one-off ivory sales of 20 metric tons (mt), 10mt, and 30mt respectively. This is the second time that CITES has permitted such a one-off sale. In 1999, Botswana, Namibia and Zimbabwe sold almost 50 metric tons of ivory to Japan for about \$5 million.

While there is evidence that the ivory ban successfully reduced demand for ivory, especially in the West⁵³, the effects of the ban on elephant populations is less clear. Following the ivory ban in 1989, elephant numbers continued to decline in countries where poaching was the biggest problem (such as the Congo and Sudan), and continued to increase in countries where populations were already healthy (especially Botswana, Zimbabwe, and South Africa)⁵⁴. This led one recent reviewer to conclude that in Africa “factors other than legal ivory trade were the cause of elephant population changes”, particularly political stability and less corrupt law enforcement⁵⁵.

Even if CITES could succeed in destroying the positive value of elephants, then all that would be left would be their negative value. Poor Africans most often bear the brunt of Western conservation initiatives, which focus on protecting the elephants rather than elephant habitat, a far more important factor in ensuring elephant survival. Consequently, elephants are often viewed as a real nuisance to people, trampling crops and humans, knocking houses over, and generally wreaking havoc. It may be that in case of elephants, the best hope for their protection is the alleviation of poverty and the reform of domestic institutions that have encouraged poaching and habitat conversion—an area that CITES has no real jurisdiction over.

Rhinos

Rhinos are another charismatic African species that has suffered from poaching, as their horns are valued both as ceremonial dagger handles in Yemen and for traditional Chinese medicine. There are two main species that occur in Africa, the white rhino and the black rhino. CITES banned the trade of white rhino parts at its first conference of the parties in 1975, and black rhinos were added to Appendix I at the next meeting in 1977.

⁵³ Michael ‘t Sas-Rolfes, “Assessing Cites: Four Case Studies,” in in Jon Hutton and Barnabus Dickson (Eds.), *Endangered Species Threatened Convention: The Past, Present and Future of CITES*, London: Earthscan, (2000), pp. 69-87.

⁵⁴ Daniel Stiles, “The ivory trade and elephant conservation,” *Environmental Conservation*, Vol. 31 no. 4 (2004), pp. 309–321.

⁵⁵ Stiles p. 313.

Nevertheless, black rhinos numbers fell precipitously, dropping 95 percent between 1970 and 1994⁵⁶. And so by 1994, the black rhino was closer to extinction than ever before. According to South African economist Michael 't Sas Rolfes, the CITES trade ban “had no discernible positive effect on rhino numbers, and did not seem to stop the trade in rhino horn. If anything, the Appendix I listings led to a sharp increase in the black market price of rhino horn, which simply fueled further poaching and encouraged speculative stockpiling of horn.”⁵⁷

The white rhino, on the other hand, was continuing its remarkable recovery from near extirpation, particularly in South Africa. In the early 1900s, the white rhino was believed to have been extinct in South Africa before a single population of less than 100 animals was discovered in Natal, South Africa. At this point the Natal Parks Board took a different approach to rhino conservation than the rest of the continent – it commercialized them. In 1986 the Board began holding auctions to sell live white rhinos to private landowners, both for trophy hunting and game viewing. Revenues were used to fund park activities, including the protection and breeding of white rhinos, and the white rhino population increased rapidly both inside the parks on private lands, where by 2000 at least 20 percent of the white rhinos in South Africa resided⁵⁸.

The Cayman Turtle Farm

Around the world, all seven marine sea turtle species such as the green sea turtle are threatened or endangered. The primary threats are habitat loss (particularly on beaches where they lay their eggs) and both direct and indirect fishing pressure. Jacques Cousteau proclaimed decades ago that “If the green sea turtle is to survive, it must be farmed,” and in the late 1960s a former chicken farmer decided to give it a go in the Cayman Islands.⁵⁹ In the 1970s, the farm began ranching the turtles, collecting eggs from the wild and then rearing the turtles on the farm. The farm also released chicks back into the wild to supplement the natural populations that the farm depended on.

The green sea turtle was listed in CITES Appendix II when the convention came into force in 1975, moved to Appendix I in 1977, and was added to the U.S. endangered species list in 1978. The farm was on its way to becoming a closed system, but because it was collecting eggs in the wild, concerns were raised about its effect on wild populations. The farm primarily traded with the UK, which was considered domestic trade by CITES because the Caymans were a UK dependency⁶⁰. The ESA listing in 1978, however, was a crushing blow because it stopped all transshipments from the Caymans through Miami, the only viable port for exports.

The Farm tried to fight the trade restriction in the U.S. courts, but ultimately failed when the court found that the Cayman Turtle Farm had not demonstrated its

⁵⁶ See Michael De Alessi, “Private Conservation and Black Rhinos in Zimbabwe: The Savé Valley and Bubiana Conservancies,” Washington, DC: Center for Private Conservation, (January 2000), downloaded from http://www.rhinosourcecenter.com/ref_files/1175861954.pdf July 2, 2009.

⁵⁷ 't Sas-Rolfes p. 71.

⁵⁸ 't Sas-Rolfes p. 73.

⁵⁹ Robert J. Smith, “Private Solutions to Conservation Problems”, in Tyler Cowan (Ed.), *The Theory of Market Failure*, Fairfax, VA: George Mason University Press (1988), pp. 341-60.

⁶⁰ Karen L. Eckert, Karen A. Bjorndal, F. Alberto Abreu-Grobois, and M. Donnelly (Eds), *Research and Management Techniques for the Conservation of Sea Turtles*. IUCN/SSC Marine Turtle Specialist Group Publication No. 4 (1999).

positive contribution to the conservation of wild sea turtles⁶¹. Other conservationists at the time, and even some detractors who primarily objected to the commercialization of the turtles, disagreed, believing that the Farm was “of real importance to conservation as well as biology”⁶². At the time of the U.S. ruling, the wild population of green sea turtles in the Caribbean and Gulf of Mexico was estimated to be around 5,000 animals. When the Farm went bankrupt in 1979, it had close to 100,000 green sea turtles in captivity. The Farm was subsequently taken over by the Cayman government and is now run as a popular tourist attraction with about 10,000 turtles on site⁶³.

Earth Sanctuaries Ltd.

While not a direct example of CITES’ affect on conservation, Earth Sanctuaries Ltd. (ESL) in another international example worth mentioning. Set up by an academic mathematician in the late 1960s, Earth Sanctuaries began as a small private wildlife reserve outside of Adelaide, Australia, which evolved over thirty years into an ambitious effort to tap into Australia’s financial markets to facilitate the protection of every representative native species and habitat in Australia⁶⁴.

Australia has one of the highest rates of mammalian extinction in the world, largely because its species evolved in isolation from the rest of the world’s continents, and so were ill-equipped to deal with the introduced predators and competitors that came with European settlement. ESL was a pioneer in conserving species through the eradication, rather than control, of these species, the worst offenders of which are cats, foxes, and rabbits. ESL was set up as a for-profit company because its founder, John Wamsley, believed in demonstrating that conservation could be profitable.

And for a time it was. When ESL started buying land, building feral-proof fences and reintroducing native species, endangered Australian species like woylies, rufous bettongs, long-nosed potoroos and Southern brown bandicoots thrived. Some species, like the Eastern quoll could only be seen on mainland Australia in one of ESL’s sanctuaries. The species drew paying visitors to the sanctuaries, especially Warrawong, the initial, small sanctuary near Adelaide.

ESL’s business plan that included specific target numbers for species recovery, as well as for land acquisition. After great success early on, ESL set its sights on larger sanctuaries, with one in the remote bush, Scotia, totally over 160,000 acres. Fewer visitors were willing to trek out into the outback, and ESL decided that tapping into financial markets was the only to access the kinds of funds needed to protect wildlife on the scale they envisioned. Thus, in May 2000 Earth Sanctuaries, Ltd. was listed on the Australian Stock Exchange (ASX code ESL), earning the distinction of being the world’s first publicly listed company whose “core business is conservation”⁶⁵. While the offering resulted in an significant inflow of cash to ESL, the stock price soon fell, and ESL eventually went under, and its wildlife sanctuaries are now owned and managed by nonprofit environmental organizations.

⁶¹ *Cayman Turtle Farm v. Andrus* 478 F. Supp. 125 (D.D.C. 1979).

⁶² Sam Fosdick and Peggy Fosdick, *Last Chance Lost?*, New York: Irvin S. Naylor (1994).

⁶³ Cayman Turtle Farm, “history”, downloaded from <http://turtle.ky/history.htm> July 9, 2009.

⁶⁴ see Michael De Alessi, “Saving Endangered Species Privately: A Case Study of Earth Sanctuaries, Ltd.,” *Policy Study 313*, Los Angeles: Reason Foundation, (August 2003).

⁶⁵ Earth Sanctuaries, Ltd. press release, (May 2000).

One of the biggest problems faced by ESL (along with a worldwide dip in financial markets shortly following their initial public offering) was that despite great success in protecting and propagating endangered and threatened species, there was no real way to value them in a financial report. As under the ESA, Australian law makes trade in these species illegal. And without a market, it was impossible under current accounting standards to put endangered and threatened species in the asset column.

Lessons Learned and the Convention on Biological Diversity

Each of these case studies demonstrates the potential benefits of conservation through commerce, as well as the possible harm caused to species protection efforts when species are treated as liabilities instead of assets. CITES has recognized the success of a number of ranching and breeding programs, including the Nile crocodile and the South African white rhino, but circumstances seem to be somewhat hit or miss. For example, farming reptilians of the crocodile family seems to be acceptable, but not of the sea turtle family. And even when farming is allowed under CITES, there is still little or no effect on the habitat for these species in the wild, let alone the other species which also use that habitat.

CITES has also recognized the importance of community-based conservation – that is, that conservation will be more likely in developing countries when the people who live with wildlife see benefits from that wildlife – but has been able to evince little direct change. In the case of the African elephant, support for communal conservation was one reason for the allowance of one-off sales of ivory in countries like Botswana, Namibia, and Zimbabwe, but just how much of those government to government sales trickled down to rural communities is questionable.

One of the most notable responses to both the primacy of habitat in conservation and the importance of community-level conservation has been the 1992 Convention on Biological Diversity (CBD), which arose from the UN Conference on Environment and Development in Rio de Janeiro. The CBD prioritizes sustainable development and puts conservation in a different context than CITES. Specifically, its Preamble recognizes “that economic and social development and poverty eradication are the first and overriding priorities of developing countries”⁶⁶. In addition the Secretariat of the CBD has a program specifically aimed at highlighting “the importance of positive incentives” to conservation and development⁶⁷.

One of the tenets of the CBD is that it grants to sovereign nations property rights over natural resources within their borders. Of course, that does not mean that those resources are then well-managed, but it is at least an attempt to create positive incentives for conservation at an international scale⁶⁸. The ESA has also moved toward recognizing the importance of habitat and the potential negative incentives created by land-use restrictions. It would do well to recognize those some problems in international species conservation as well.

⁶⁶ Preamble to the Convention on Biological Diversity (1992), downloaded from <http://www.cbd.int/convention/articles.shtml?a=cbd-00> on August 19, 2009.

⁶⁷ CBD Secretariat, “Overview of CBD Activities,” (2009), downloaded from <http://www.cbd.int/incentives/positive.shtml> August 20, 2009.

⁶⁸ Christopher Barrett, Katrina Brandon, Clark Gibson, and Heidi Gjertsen, “Conserving Tropical Biodiversity amid Weak Institutions,” *BioScience*, Vol. 51, No. 6 (June 2001), pp. 497-502.

Suggested ESA reforms

CITES has been described as “the most direct international manifestation of the ESA”⁶⁹ ESA reform that recognized, or even facilitated conservation through commerce would almost certainly have wide-ranging effects on CITES. Such changes to the ESA might include:

- Recognize the limitations of listing foreign species under the ESA, and get rid of them. For funding international research, can use CITES/IUCN Red List priorities and USFWS discretion.
- If foreign listings and import restrictions remain, then relax the language of the ESA to fit the CITES standard. That is, to allow trade when it is *not detrimental* to species populations (the CITES standard for Appendix II species) rather than only to allow trade when it demonstrably *enhances the survival* of species populations.
- As long as the CITES approach persists, some USFWS funding should go to methods of differentiating between populations in different countries, between wild and farmed species, and between species that are protected on private and communal lands.

⁶⁹ Carlo Balistreri, “International Aspects of the Endangered Species Act,” in Donald C. Baur and William Robert Irvin (eds), *The Endangered Species Act: law, policy, and perspectives*, p. 496.