

Do Wildlife Trade Bans Enhance or Undermine Conservation Efforts?

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Applied Biodiversity Sciences Perspectives Series No. 1(3)

May, 2011

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Suggested citation:

+ Santos, A., Satchabut, T., & Vigo Trauco, G. (2001). Do wildlife trade bans enhance or undermine conservation efforts? *Applied Biodiversity Perspective Series, 1(3)*, 1-15.

ABSTRACT

The billion dollar businesses of both legal and illegal wildlife trade show little decline and continue to pose major threats to global biodiversity. Despite international wildlife trade bans such as the Appendix I listing of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the illegal trade of wildlife undermines conservation efforts. Evidence has shown that Appendix I listing can inadvertently increase black market prices and trade of wildlife. However, examples of national scale bans combined with CITES restrictions can decrease wildlife trade activity. More collaboration and integrative measures between global, national and local institutions are needed to combat wildlife trade issues.

Keywords: Wildlife trade, Black Market, Conservation

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Do Wildlife Trade Bans Enhance or Undermine Conservation Efforts?

Introduction

The multi-billion dollar business of the global wildlife trade is a threat to biodiversity (Rosen & Smith, 2010), particularly through transposed illegal trade when bans on wildlife trade are implemented. In 2005, the global legal market for wildlife including plants and animals and excluding timber, was valued at US \$21 billion and this market is rapidly growing each year as billions of plants, animals and their derivatives are traded to meet consumer demand for food, clothing, traditional medicines, trophies, etc. (Rosen & Smith, 2010). Furthermore, the dollar estimates of legal trade do not represent the entirety of wildlife trade or effects on biodiversity loss because this amount does not take into account illegal activity (Nijman, 2010). It was noted by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2007 that illegal wildlife trade was valued between US \$5 and \$20] billion per year. Accordingly, this illegal trade “is among the world’s largest illegitimate businesses, after narcotics” (Rosen & Smith, 2010, p. 24) as it is less risky and more profitable than other illegal trades (Cook et al., 2002; Lowther et al., 2002; Wyatt, 2009; Zimmerman, 2003). Arguably, a ban on wildlife trade may make these products more valuable and/or appealing (Abensperg-Traun, 2009; Economist, 2008; Nijman, 2010; Nijman et al., 2009; Rivalan et al., 2007; Waddell, 2010). This has been the case with the trade of rhino horn and elephant ivory among other wildlife products. On the other hand, positive results have been shown in the case of bans on the trade of wild bird species (Pain et al., 2006). The effectiveness of wildlife trade prohibitions on protecting species populations are dependent upon many factors that must be considered within the contexts of addressing the demand for wildlife, and the capacity to regulate the legal trade and enforce illegal trade in exporting countries. Multi-scale approaches that include CITES Appendix I listing and concurrent national level bans along with building enforcement capacity and education initiatives may help leverage the regulation of wildlife trade while safeguarding other species populations.

The Regulation of Wildlife Trade

International wildlife trade is regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) est. 1973. This is an international environmental agreement among 150 parties that regulate trade of over 30,000 endangered animal and plant species. The primary goal of CITES is to ensure that wildlife affected by international trade are not exploited unsustainably. The degree of regulation over wildlife trade is established by three CITES appendices: 1) Appendix I prohibits international trade of species threatened with extinction (exceptions of non-commercial uses include hunting trophies, parts and derivatives); 2) Appendix II protects species not presently threatened with extinction, but of high risk to becoming threatened if trade is not controlled, and allows commercial trade via permits; and 3) Appendix III protects species upon request of needed Parties and permits less restrictive controlled trade than Appendix II. According to its original agreement, the Convention prohibits and/or bans any type of international commercial trade of species listed in Appendix I. Appendix I listings are of main concern, because as previously mentioned, “up listing” to Appendix I status can increase illegal trade activity (Abensperg-Traun, 2009; Economist, 2008; Rivalan et al., 2007).

During the last two decades, CITES criteria have evolved to clarify the definition of “sustainable use” (Abensperg-Traun, 2009). Furthermore, due to the recent international recognition of the connection between poverty and biodiversity loss, the Convention has adopted a series of modifications with the intention of supporting the objectives of the Millennium Development Goals (CITES resolution Conf. 14.2, 2007). It is recognized that the trade of wildlife provides income to marginalized peoples and is a means to conservation and development agendas (Nijman, 2010). Within this context, the Convention supports the sustainable extractive use of wildlife “as a strategy to achieve biodiversity conservation and poverty alleviation” (Abensperg-Traun, 2009, p. 951). The Convention regulations include Articles or amendments to support specific Appendices. In regard to promoting sustainable extraction and recognizing the economic needs of exporting countries, Article IV in support of Appendix II states that exporting countries are the authority in determining if the trade is “non-detrimental to the survival of the species” (CITES Article IV of the CITES Convention and of the

EU Wildlife Trade Regulation No.338/97). Another example is the case of Appendix I and the exception of the permit that controls non-commercial trade of hunting trophies and parts and derivatives of wildlife. In addition to these trade regulations, the Convention rectifies its agreements with “the right of Parties to adopt stricter domestic measurements regarding the conditions included in Appendix I and II” (CITES Article XIV of the CITES Convention and of the EU Wildlife Trade Regulation No.338/97). Overall, CITES regulations are challenging to uphold and controversial in regard to satisfying economic needs in countries that lack the capacity to govern the sustainable use of wildlife products (Abensperg-Traun, 2009; Smith et al , 2003)

Wildlife Bans: Definitions and Types

A wildlife ban is an official decree that prohibits the commercial trade of wildlife individuals, parts and/or derivatives. The general intention of wildlife bans is to decrease, to some extent, the commercial use of particular species in order to safeguard its population. Typically, wildlife bans are species specific and often include a period of time in which they are “active” in order to support the population recovery of an endangered species. There is often misunderstanding of the expression “wildlife bans” in common discourse. The confusion is based on the fact that CITES as an international regulation institution has the capacity to forbid international wildlife trade; however, individual governments adjust to internal national regulations. Here we discuss two types of wildlife bans, including wildlife bans implemented by the CITES Convention and wildlife bans implemented by nations.

International Wildlife Bans Implemented by CITES

CITES as an international agreement among Parties that has authority to “up-list” species from Appendices II-III to Appendix I or vice versa. Changes in listings must be approved by a 2/3 majority vote of all Parties. This decision is informed by scientific information provided by the country(s) requesting changes in species listings. The up-listing of species to Appendix I results in the international trade ban of the species. The effectiveness of this type of ban on reducing threat to the species of interest and the socio-economic effects are hotly debated. Not only are there repercussions on the economy of local communities involved at some level of

the trade (Abensperg-Traun, 2009) it has been argued that banning the legal trade of species increases illegal trade (Economist, 2008; Rivalan, et al., 2007). Elephants (*Loxodonta africana*), black rhinoceros (*Diceros bicornis*) and southern white rhinoceros (*Ceratotherium simum*) are among many species in which populations have decreased despite CITES trade bans leading to debate.

In other circumstances, CITES may suspend the importation of specific endangered species in particular countries, a type of resolution that may be taken after a CITES Significant Trade Reviews (STR) of the specific species. The reviews analyze different influential factors that may be causing decreases in species populations and questions the sustainability of the extraction by examining increases in exportations and enforcement capacity of national-scale laws to regulate wildlife trade. This was the case of the CITES trade suspension implemented in 2002 of the African grey parrot (*Psittacus erithacus*) in the Democratic Republic of Congo (DRC). The African grey parrot “is one of the most popular avian pets in Europe, the US and Middle East” whose populations have been declining according to Birdlife International (2008). It is currently listed on the International Union of Conservation of Nature (IUCN) Red List as “Near Threatened” and it was down-listed in 1981 from Appendix I to Appendix II. Due to major increases in exportations reported in the mid-1980s, the commercial trade of the species has been subject to three CITES STRs. The commercial trade of the African grey parrot has regularly exceeded trade quotas and illegal trade is highly suspected (TRAFFIC, 2007). Currently, eight home range states have long term importation suspensions and five other states are considered urgent by the CITES STR. In the case of DRC, the imports reported by importers (42,621 individuals) from 1997 to 2005 double the exports reported by the state (24,211 individuals) (TRAFFIC, 2007). In addition, the export tendency increased and there was insufficient population information. For these reasons, exportations of African grey parrots from DRC were suspended).

Non-CITES International Wildlife Bans

National governments’ influential role in international trade is recognized by national scale policy of wildlife trade. Two examples of national level institutions that place bans on the

importation of wildlife are discussed here. Both are considered controversial in regard to the socio-economic impacts on wildlife exporter countries. The Wild Bird Conservation Act is a United States Fish and Wildlife Service (USFWS) regulation that was unanimously passed by US Congress and signed into law on October 23, 1992. This set of rules limit the importation of exotic bird species to ensure that their populations are not harmed by international trade (USFWS, 2009). In this case, the act was created as an internal restriction and was lifted to a law due to the decline of wild bird importations in the US. The act prohibits the importation of wild birds, is regulated by the USFWS, and is based on three criteria, including sustainability of extraction, survival of wild populations and effectiveness of CITES implementation in the exporting countries.

The indefinite suspension of avian imports by the European Union (EU) is another example of non-CITES wildlife trade regulations. It was implemented with the intent to diminish the trade's harmful effects on the conservation status of species; it was concerned with prevention of the spread of a disease. Since 2005, the EU has been discussing the health risks of wild bird trade to both human and animal populations. In 2005, an initial ban on captive-bred and wild bird importation was adopted. The following year, 226 non-governmental organizations established the "The European Union Wild Bird Declaration." In this document, the urgency for a permanent end to the importation of wild birds into the EU was justified using three principal arguments that included human life and livelihoods risk, bird species survival and inhumane treatment of animals. In 2007, indefinite suspension was established outside the realm of CITES Secretariat and without reference to Regulation 338/97 under directives and regulations relating specifically to animal health (CITES, 2007).

Effective Wildlife Bans

In the early 1980s, the scientific and conservation new-world parrot community declared all Neotropical psittacines in crisis. The high demands and the increasing commercial trade of parrots for aviculture and pets caused extreme concern in many home range countries. Despite the fact that 30% of 140 species of Neotropical parrots were threatened with some level of extinction, more than 1.8 million parrots were legally traded from 1979 to 1984. In

1981, all of the psittacidae family (macaws, parrots and parakeets) were included in CITES appendix II. Some Central and South American exporter countries implemented domestic bans and other regulations to control domestic and international parrot trade but low enforcement capacity reduced them to “paper laws.” In addition, few studies of wild populations, which limited a quantifiable understanding of more than 90% of parrot species. During this time, the major importers were US (47.6%), EU (29.8%) and Japan (5.2%), and while the Wild Bird Conservation Act (WBCA) was implemented in 1992 by the US government, a ban was placed on the importation of CITES Appendix I and I bird species. (Beissinger & Snyder, 1992a; Beissinger & Snyder, 1992b).

Some scientific studies show that the WBCA ban was an effective conservation strategy. According to official CITES importation records, a dramatic decrease in legal importations following implementation of the ban was reported. According to Pain et al. (2006) there was a decline of importation into the US from home range countries and no evidence of displaced import to other countries. Studies have illustrated a positive correlation between legal protection and direct threats of species (Pain et al., 2006; Wright et al., 2001). In addition, it has been demonstrated that CITES Appendix I listing is an important component of national protection (Pain et al., 2006; Wright et al., 2001). There is also evidence that the legal trade masked illegal trade operations such as the case of species from countries where a wildlife ban existed that were moved to another country in which official legal documentation could be obtained (Wright et al., 2001). Finally, an extensive parrot reproductive biology compilation and analysis showed a decrease in nest poaching in years subsequent to the ban implementation. A decrease in nest poaching signifies an increase in nest success which is a clear indicator that the WBCA had a positive impact on wild parrot populations (Wright et al., 2001).

Ineffective Wildlife Bans

South Africa hosts more than 90% of the world’s white rhinos and approximately one third of the rare black rhino. However, it has been reported that at least 260 South African rhinos were illegally killed in 2010, or in other words, about one rhino is killed per day - a rate which doubles the estimated total in 2010 (Waddell, 2010). The country is faced with serious

rhino poaching, including highly organized international crime showing remarkable coordination as well as local cooperation (Flanagan, 2010). Since 1976, under CITES, trade of rhino horn has been banned and all of the five major rhino species have been listed as either threatened with extinction or endangered. Nevertheless, increasing illegal trade in horns has coincided with the ban (Abensperg-Traun, 2009). The most important reason stated by some conservationists, is that current laws and policies pertaining to the international trade of rhino horns actually encourages crime units to find avenues of bypassing these regulations (Larson, 2010). This is an example in which an Appendix I listing cannot guarantee the survival of the species without effective field protection (Abensperg-Traun, 2009). The decline of rhino populations is correlated with increased horn prices of the black market (Leader-Williams, 2005) subsequent to “the up-listing, political instability, corruption and lack of political will and resources to control poaching” (Abensperg-Traun, 2009, p. 954). According to Rivalan et al. (2007) “the price of rhino horn on Korean markets increased by more than 400% within two years of their up-listing, which in turn coincided with a sharp increase in poaching of black rhinos and in illegal trade in rhino horn” (Rivalan et al., 2009, p. 530). There is weak evidence that Appendix I listing can improve the conservation status of species as the black market trade persists despite the trade ban (Abensperg-Traun, 2009) and the inability to track illegal activity confounds the problem.

In 1987, CITES Contracting Parties extended the ban by outlawing domestic trade in rhino products. However, it provided a major loophole as the ban failed to include stockpiled horns. Consequently, the difficulty to distinguish between stockpiled and newly imported horns enabled the continuation of rhino horn trade. As previously mentioned the trade continues today despite the CITES Appendix I listing and 1987 regulation and several CITES Party country members continue to trade rhino products (particularly rhino horn). Therefore, it is argued that there are problems with this enforcement mechanism and “CITES' ability to legislate domestic enforcement mechanisms are non-existent” (Still, 2003, p. 120). For example, although China has been a CITES Party since 1981, it is the world's largest importer of rhino horn and manufacturer of rhino products, suggesting that the effectiveness of Appendix I listing is essentially dependent upon an individual country's compliance and enforcement capacity

(Evans, 2010; Smith et al., 2003). While importing nations are suggested to find substitutes for rhino products and enforce trading prohibitions, many exporting nations are combating with well-equipped poachers (Evans, 2010). In one case, a veteran ranger at Kruger National Park in South Africa stated, “Where we once had to deal with poachers wearing flip-flops and using home-made snares, we are now faced with criminal gangs deploying GPS devices, night-vision equipment and foot soldiers to track rhinos for days” said Cathy Dean of Save the Rhino International in Flanagan’s (2010) article in *The Telegraph*. According to Milledge (2007), high-tech equipment such as helicopters, military-graded guns and prescription tranquilizers are used in the illegal rhino trade.

The success of trade bans also depends upon compliance of CITES Parties. Several suggestions have been raised in an attempt to minimize or stop illegal trade of rhino in South Africa. An inspector for the South African Police Service at Kruger National Park argued, “Arresting people and sending them to jail is not stopping poaching. The only thing that can help is to reduce or completely stop the trade in rhino horn” (Hough, 2010, p.3). The most controversial suggestion is to lift the ban on rhino-horn trading, specifically to legalize the trade (Hough, 2010; Milledge, 2007). However, the South African government does not have adequate resources to protect animals from illegal poaching and lacks capacity to regulate legal trade. “Prices for rhino horn created a negative incentive by favoring poachers rather than conservationists and the fact that CITES CoP13 (2002) attached commercial value to rhino species by down-listing South African populations to Appendix II in 1994 and permits an annual export of five hunting trophies” (Abensperg-Traun 2009, p. 954), which leads to further debate. The strategy to use trophy hunting as a means to protect rhino species resents moral concerns and there is little evidence that it improves rhino conservation status (Leader-Williams et al., 2005). In the case of rhino species of African nations, CITES Appendix I listing has done little to help rhino populations, rather it has contributed to the thriving underground trade of rhino horns with rapid species decline (Beacham, 1992; Song & Milliken, 1990). It is argued that in addition to imposing vigilant controls and fines, more rigorous enforcement of poaching needs to be imposed with improved cooperation among all stakeholders (Abensperg-Traun, 2009; Evans, 2010).

Factors Influencing the Success of Wildlife Trade Bans

The ability of CITES Appendix I listing and other bans on the commercial trade of wildlife to prevent species population declines depends on complex factors and are context dependent. In addition to the cases presented here on effective trade bans on parrots and ineffective bans on the trade of rhino parts, success appears to depend on the regulation and enforcement capacity of exporting countries (Economist, 2008). According to Smith et al. (2003) political corruption in home range countries contributes to the ineffectiveness of CITES bans and regulations. For example, populations of the African and Asian elephants have also continued to decline despite CITES ban on ivory trade (Abensperg-Traun, 2009; Smith et al., 2003). Another problem is the demand on wildlife and wildlife products (Nijman, 2010). As previously mentioned, China is a major importer of rhino products as well as elephant ivory, and southeast Asia in general is a major trading hub of wildlife (Rosen & Smith, 2010) with China, Japan and the EU being among the major importers of wildlife products (Nijman, 2010). As long as demand is high, both legal and illegal trade of wildlife and products will continue. Education and awareness, particularly in importing countries have been a major priority of initiatives such as World Wildlife Fund TRAFFIC and ASEAN-WEN to combat unsustainable trade (Rosen & Smith, 2010). However, as previously mentioned the root of the wildlife trade problem involves not only political instability and corruption but the paralleled issues of lack of capacity to regulate legal trade and control illegal trade. For example, according to Smith et al. (2009), the majority of wildlife imported to the US lacks proper taxonomic information and species are being passed off as “non-cites.” and there is no mechanism in place to manage this issue. In regard to capacity of exporter or extractive countries, the inability to control poaching and the lack of clear property rights where extraction occurs contributes to the instability of wildlife trade (Economist, 2008).

The illegal trade of wildlife undermines the CITES convention and national scale regulations of wildlife, and has greatly increased regardless of imposed wildlife trade bans. It has controversially been suggested that the legal trade of wildlife creates an avenue in which the legal trade exists (Wyatt, 2009) and that bans cause an increase of illegal trade (Abensperg-

Traun, 2009; Economist, 2008; Rivalan et al., 2007). According to Wyatt (2009), poached fur enters the legal market via middlemen serving legal trade in Russia. In a different context, the illegal trade of the Javan hawk eagle (*Spizaetus bartelsi*) increased following the declaration of the species as rare and the banning of its trade in Indonesia. It has also been posited that sharp increases in illegal trade occur just prior to the implementation of a ban (Rivalan et al., 2007). These authors show that the lag time from the proposal of a species up-listing to CITES Appendix I to ban implementation provides an incentive for peak trade of the proposed species. As a result, a more proactive approach is suggested that includes a reduction in lag prior to ban execution and strategies that address demand for wildlife products.

Marketing strategies that make wildlife and derivative products less attractive to consumers may reduce demand. For example “trade in cat and seal skins, and in parrots, has fallen because consumer campaigns destroyed demand at the same time as trade bans cut the legal supply” (Economist, 2008). In the case of pet wild parrots, an international campaign organized by 226 non-governmental organizations, including the American Bird Conservancy, Greenpeace, National Audubon Society and World Parrot Trust, presented the document “The European Union Wild Bird Declaration” to the scientific community and general public to communicate the urgent need to stop wild bird importations to the European market. The marketing campaign had two strategies: first, it highlighted the risks of human livelihoods and the irreparable damage to wild populations, and second, it focused on consumers (i.e., pet bird owners), pointing to threats to species survival and the inhumane character of the bird trade. As a result, in 2007 the EU banned importation of wild birds. Both the ban and the marketing of unattractive bird products to pet owners have decreased exportation of birds from home range countries. Wildlife product demand is also price sensitive and following a trade prohibition, the final products in the market have tended to increase in price due to uniqueness reducing general purchase (Economist, 2008). Demand may also decrease when substitutes are available. In the case of the parrots, individuals raised in captivity are tamer and in better physical condition than individuals extracted from the wild. In other words, they represent a better option because of it they are considered higher quality pets. Overall, these examples

show that bans can undermine conservation efforts rather than help them if consumer demand and enforcement capacity of exporter countries are not addressed.

Conclusion

The ability of wildlife trade bans to effectively help stabilize species populations is highly dependent on reducing the demand for wildlife products and the enforcement capacity of exporter countries, both of which are context specific. As shown here, Appendix I listing and national scale trade bans are followed by an increase in the illegal trade of the species at hand, which suggests an inverse relationship between the legal and illegal trade. Despite CITES and national scale regulations, the illegal trade of wildlife persists particularly in nations that lack the capacity to deal with ever-increasing sophisticated crime rings that control illegal trade. Initiatives should begin at the site of extraction to resolve underlying issues of individual access to wildlife resources and determine the motivations behind poaching. At the opposite end of the wildlife trade spectrum, although reducing consumer demands for wildlife and wildlife products may ameliorate current pressures on wildlife populations, the education of future generations should be a key strategy to reduce long-term pressures. The combination of international, national and local scale bans and strategies that include enforcement and educational initiatives may provide a stronger foundation for regulating wildlife trade and safeguarding species populations.

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