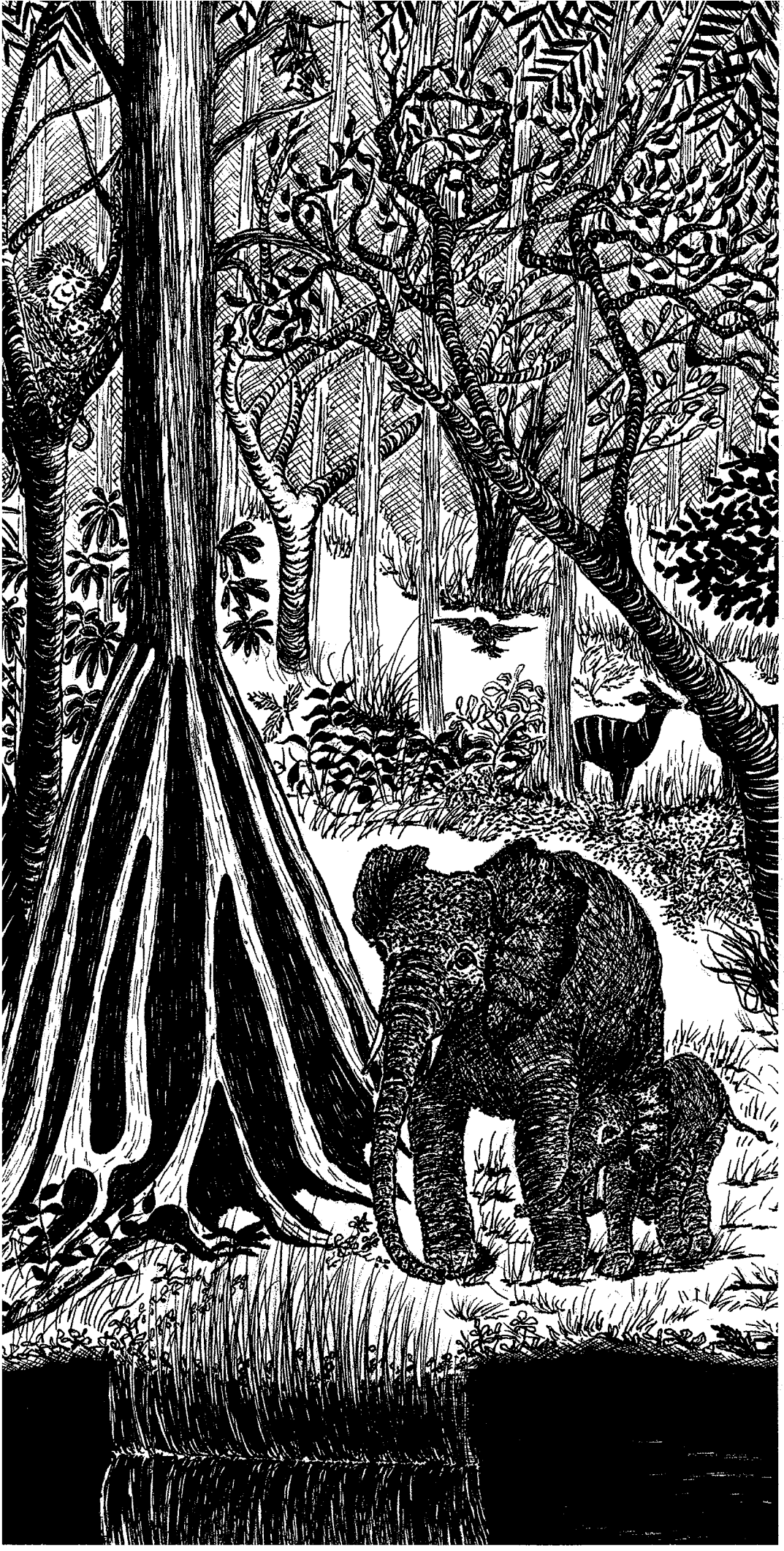

THE BIODIVERSITY CONVENTION AND EXISTING INTERNATIONAL AGREEMENTS: OPPORTUNITIES FOR SYNERGY

THE HUMANE SOCIETY OF THE UNITED STATES AND HUMANE SOCIETY INTERNATIONAL

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Statement from the CITES Secretariat

This report represents views that are generally shared by the CITES Secretariat, which is also convinced that CITES and the Convention on Biological Diversity are complementary and not contradictory. Comparing the texts of the two treaties, the report provides sufficient evidence of this complementarity.

Those who consider that CITES is in contradiction with the Convention on Biological Diversity, and there are a number of such people, either do not know CITES correctly or make their judgement on the basis of certain interpretations of the Convention. Such judgements are a response to the way in which some individuals, organizations and even States wish to see CITES used and implemented.

It is obvious that the scope of the Convention on Biological Diversity is much broader than that of CITES. The latter should be considered as a conservation tool to control the international - and only international - trade in wildlife and make sure that this trade does remain an element of the sustainable use of wildlife. Cooperation between the two Conventions is therefore necessary and will certainly be developed when the practical objectives and fields of activity of the Convention on Biological Diversity have been clearly defined by the Conference of the Parties to it. Consultations have already taken place between the Secretariats of the two Conventions and there is no doubt that they will continue to develop in the future, a process which would be facilitated by their continued co-location.

We do hope in the CITES Secretariat that this report will contribute to a better understanding of the objectives and complementarity of the two Conventions.

Secretariat
Convention on International Trade in Endangered
Species of Wild Fauna and Flora
Geneva, Switzerland

8 June 1995

The Biodiversity Convention and Existing International Agreements: Opportunities for Synergy

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Introduction

Some Parties to the Convention on Biological Diversity (the "Biodiversity Convention")[1] have suggested that the Biodiversity Convention sets new standards for conservation and sustainable use which are inconsistent with standards established under previous international conservation agreements, most notably the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[2] These suggestions mischaracterize the fundamental purposes and language of the Biodiversity Convention and existing agreements, as well as the concept of sustainable use. Although the term "sustainable use" has recent origins, the concepts it embodies have been accepted for many years and are enshrined in existing agreements, such as CITES. Rather than conflict, the Biodiversity Convention and existing international environmental agreements mutually reinforce each other, particularly to achieve sustainable use of biological diversity.

The Biodiversity Convention explicitly is designed to reinforce and support previous conservation agreements. It calls on parties to cooperate internationally — through existing international institutions where appropriate — on specific matters of mutual interest involving conservation and sustainable use.[3] It calls on parties to protect threatened species and populations, and to ensure that the use of biological diversity is sustainable.[4] It defines sustainable use in strict but general terms, because it recognizes that the parties must develop specific sustainable use rules for specific uses of specific resources, including plants and animals.[5] In addition, it specifically provides that the Biodiversity Convention does not affect a party's obligations under a previous international agreement unless the previous agreement poses a serious threat to biodiversity.[6]

In sum, the Biodiversity Convention directs the Parties to develop ways of strengthening and supporting other agreements within the framework of the Biodiversity Convention. In fact, many prior conservation agreements, such as CITES or the Convention on Wetlands of International Importance (the "Ramsar Convention"),[7] complement the Biodiversity Convention extremely well — as the drafters of the Biodiversity Convention envisioned. The provisions of CITES and Ramsar represent significant implementation of specific obligations of the Biodiversity Convention. For example, the Biodiversity Convention requires Parties to protect threatened species and to ensure that uses of biological diversity are sustainable. CITES already protects threatened and endangered species from over-utilization due to international trade and creates a mechanism to ensure that trade is sustainable. CITES prohibits international commercial trade only when that particular use is not conducted sustainably. The Biodiversity Convention also requires Parties to protect ecosystems and natural habitats. The parties to the Ramsar Convention already have protected over 32.3 million hectares.[8]

These actions cannot be considered as serious threats to biodiversity. The fact that Parties to the Biodiversity Convention are required to protect threatened species from all threats, not only international commercial trade, does not make CITES any less important than or inconsistent with the Biodiversity Convention. Similarly, Ramsar is not inconsistent with the Biodiversity Convention because it only protects wetlands. Instead, CITES can be used as a model for protecting species from particular threats; the Ramsar Convention can be used as a model for protecting other ecosystems and habitats.

Moreover, prior conservation agreements are clearly consistent with the Biodiversity Convention's sustainable use objective. As defined by the Biodiversity Convention, sustainable use requires Parties to ensure that uses of species do not cause the long-term decline of a species so that this and future generations can enjoy and use it.[9] Recognizing the difficulties of achieving sustainable use of biological diversity,

the Biodiversity Convention provides a comprehensive strategy for sustainable use, including planning,[10] monitoring,[11] protecting ecosystems and threatened species,[12] and cooperating internationally.[13] The comprehensive structure is designed to ensure that all existing and any future uses of biological diversity are in fact sustainable and the full range of values and uses of any resource or species is maintained. The use of the term "sustainable use" is not an invitation to use biological diversity to the maximum extent possible.

Part I of this paper demonstrates that the conservation and sustainable use goals of the Biodiversity Convention are completely consistent with the conservation and use goals of CITES and the International Convention for the Regulation of Whaling (ICRW). This view is reinforced by Article 22 of the Biodiversity Convention, which specifically states that the Biodiversity Convention does not affect the rights and obligations of a Party under other agreements, unless they pose a serious threat to biodiversity. It also shows that, instead of conflicting, the Biodiversity Convention requires the cooperation of other international agreements and their institutional structures. In particular, it describes how other agreements can be used to implement the Parties' duty to develop rules for sustainable use of biological diversity. Part II offers specific recommendations to the Parties for implementing the Biodiversity Convention to ensure that trade, if it occurs, is sustainable, and how the provisions of other agreements can help make uses sustainable.

Part I — The Consistency of Existing Agreements and the Biodiversity Convention

I. The Conservation and Sustainable Use Goals of the Biodiversity Convention Are Consistent with CITES and Other Conservation Agreements

A. Sustainable Use Is a Strict Obligation of the Biodiversity Convention

Two of the primary objectives of the Biodiversity Convention are to ensure the conservation of biodiversity and sustainable use of its components.[14] As defined by the Biodiversity Convention, however, sustainable use does not mean maximum short-term use. Instead, the sustainable use provisions are designed to ensure that existing and any future human uses do not cause "the long-term decline of biological diversity thereby maintaining its potential to meet the needs and aspirations of present and future generations."[15]

While the Convention defines "sustainable use" generally, it requires Parties to achieve sustainable use by applying a comprehensive set of specific obligations to all uses of biological resources. For example, Parties are required to identify components of biological diversity for conservation and sustainable use.[16] Parties also must develop national plans for conservation and sustainable use.[17] In addition, they must establish procedures for environmental impact assessment of individual projects to ensure that they do not significantly affect biological diversity.[18] Parties are directed to create economic conditions and regulate economic activities to ensure compatibility with conservation and sustainable use of biological diversity.[19] Parties also must monitor biological resources to ensure that they are being conserved or used sustainably.[20]

The definition of "sustainable use" and the framework for ensuring sustainability reflect a precautionary approach to species use, which the Biodiversity Convention specifically endorses.[21]

As defined by the Biodiversity Convention, sustainable use requires resources and species to be conserved in perpetuity for future generations to use and enjoy.[22] Without such a precautionary approach, present generations cannot ensure that the species will be conserved for future generations to use. Implementation of the concept of sustainable use requires persons "to act in the way least likely to impair the viability of the species or ecosystem. This may result in decisions not to use [a species]."[23]

As a result, there is a need for the Parties to the Biodiversity Convention to establish stringent standards for identifying the management and legal structures required to ensure that a use is sustainable. Moreover, there is a need for the parties to monitor uses to ensure that the management and legal structures are working as anticipated. Correspondingly, the Parties to the Biodiversity Convention must ensure that they do not promote standards and uses that do not promote sustainability.

B. Conservation Measures of Existing Agreements Implement the Biodiversity Convention's Sustainable Use Objective

The Biodiversity Convention's definition of sustainable use, and its application of the precautionary principle, is entirely consistent with the conservation measures of prior agreements. CITES, for example, obligates parties to ensure conservation and sustainable use in a specific context — international trade, particulary international commercial trade. Like the Biodiversity Convention, it uses a precautionary approach. Similarly, the International Whaling Commission's moratorium on commercial whaling implements a sound sustainable use strategy, also using a precautionary approach. Although not discussed here, habitat protection agreements such as the Ramsar Convention also would be found consistent with the Biodiversity Convention.

1. The Convention on International Trade in Endangered Species

CITES implements a permit system which limits trade in threatened species without compromising a party's ability to use species sustainably. In fact, CITES' permit system is designed to ensure that trade in species is sustainable. CITES is entirely consistent with the Biodiversity Convention's standard of sustainable use.

First, both CITES and the Biodiversity Convention recognize the economic value and ecological value of species.[24] Both treaties also acknowledge that human use of a species must never be detrimental to a species' survival or impair the ability of future generations to enjoy or use a species for the species economic or ecological value. To achieve this goal, both CITES and the Biodiversity Convention employ a precautionary approach to species protection.

Second, the primary goal of CITES is to prevent the over-exploitation of species due to international trade, particulary international commercial trade. The focus of CITES on over-exploitation, rather than exploitation, implies that the treaty's function is to control or restrict unsustainable trade, not to eliminate all trade. In addition, CITES regulates only one particular threat to species — international trade. Moreover, the provisions of CITES do not apply until the parties list a species on one of the appendices. Article 8 of the Biodiversity Convention, however, requires Parties to protect threatened species from all threats.[25] Because CITES only controls international trade, the Biodiversity Convention requires more, not less protection. To fully implement Article 8, a Party must implement legislation that controls domestic commerce, regulates the collection of species, and protects habitat of threatened species.

Third, CITES requires parties to monitor trade in species that are not threatened with extinction, but may become so unless trade is

strictly regulated.[26] For these species, which the Parties list on Appendix II, the exporting country must determine that any trade will "not be detrimental to the survival of the species."[27] The phrase "not detrimental to the survival of the species" is simply another way to say "sustainable." With proper implementation, this provision permits trade in species and ensures the long-term viability of the species for present and future generations. This, of course, is identical to the sustainable use goal of the Biodiversity Convention.[28]

CITES categorically prohibits a use — international commercial trade — only when a species is threatened with extinction and may be affected by trade.[29] The history of commercial exploitation of species demonstrates that the trade prohibitions for these Appendix I species are entirely consistent with sustainable use. In fact, the parties included the African elephant, whales, chimpanzees, tigers and many other species on Appendix I precisely because international commercial trade was unsustainable. Even if the parties to CITES prohibit commercial trade in wild-caught individuals of a species, CITES provides alternatives. For example, parties can trade in individuals of species from approved captive breeding programs, even if the species is listed on Appendix I. Parties also can downlist specific populations to Appendix II to conduct ranching programs and trade in individuals from these programs, even if the species as a whole is listed on Appendix I. These provisions of CITES, which help ensure that international commercial trade is sustainable, clearly are consistent with the sustainable use provisions of the Biodiversity Convention.

2. The International Convention on the Regulation of Whaling

Despite the regulation of whaling since the 1930s, which included the International Convention of the Regulation of Whaling (the "ICRW") and its predecessor agreements, whale populations continued to decline. Finally, the International Whaling Commission (IWC), the acting body of the ICRW, prohibited all commercial whaling starting in 1986. Some countries, most notably Iceland and Norway, suggest that the continued moratorium on minke whales is antagonistic to the sustainable use of species. Scientists from the IWC, however, are extremely uncertain about how many minke whales exist. Some estimates place the minke whale population in the north atlantic where Norway wants to conduct its commercial hunting at 86,000 while others place the population at less than 50,000. The importance of permitting the parties to restrict activities in the absence of scientific certainty became very clear at the last CITES conference. A scientist for the IWC noted that if the minke whale population is 86,000, Norway's commercial kill of 300 minkes would be sustainable.[30] However, if the population is less than 50,000, a commercial kill of 300 individuals would cause a decline.[31]

Thus, the IWC's moratorium on commercial whaling is precautionary, is consistent with sustainable use, and complies with the Biodiversity Convention. Without scientific certainty concerning the minke whale population, the IWC cannot ensure that future generations will be able to enjoy and use minke whales. The Biodiversity Convention warns "that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."[32] The continuation of the moratorium on minke whales is an excellent example of the application of the precautionary principle as a mechanism to ensure sustainable use. Certainly, the significant declines in whale populations due to exploitation prior to the moratorium urge extreme caution before commercial whaling resumes.[33]

II. The Biodiversity Convention Provides That It Does Not Affect Rights and Obligations under Existing Conservation Agreements

Not only does a plain reading of the Biodiversity Convention and other environmental agreements reveal that no conflict exists, but the Biodiversity Convention also explicitly states that no conflict exists unless other agreements pose a serious threat to biodiversity.[34] The negotiators of the Biodiversity Convention fully recognized that many international agreements relating to the conservation and use of species and habitats already existed.[35] They generally agreed that "the Biodiversity Convention should supplement, not supplant, prior wildlife conservation agreements."[36] The negotiators created a working group of lawyers to investigate whether or not there was any conflict with other international agreements. The group reported that no conflict existed with any existing agreement relating to conservation of habitat and wildlife.[37]

To ensure that no doubts remained and to clarify the Biodiversity Convention's applicability, the negotiators included a provision that specifically states that the Biodiversity Convention "shall not affect the rights and obligations of any Contracting Party deriving from *any* existing international agreement, except where to exercise those rights and obligations would cause serious damage or threat to biodiversity."[38]

The suggestion that existing conservation agreements such as CITES seriously damage or threaten biological diversity is absurd. CITES, for example, restricts the very use that threatens the species. Moreover, the parties to CITES passed a resolution that trade could provides benefits for conservation, under certain circumstances.[39] Nonetheless, some parties argue that CITES' restrictions threaten biological diversity, because the restrictions prevent uses that could raise revenues for conservation purposes. However, the parties to CITES can permit increased trade in a species if a party demonstrates that the trade will not be detrimental to the species in question. The parties chose not to permit trade in some highly-publicized cases — such as elephant ivory and rhino horn — because supporters of trade failed to show that the species would not be placed in greater jeopardy or that the trade would benefit the species.

Similarly, the moratorium imposed by the International Whaling Convention will increase populations of whales. The provisions which allow parties to take these measures, and other conservation measures taken under other international agreements to protect species and habitat, cannot possibly be found to be a "serious threat" to biodiversity.

In this sense, the Biodiversity Convention provides a minimum threshold which other agreements must meet. Agreements that provide more protection than the Biodiversity Convention are consistent with it. Other agreements, particularly those relating to the utilization of species, might be inconsistent with the Biodiversity Convention if they cause a serious damage or threat to biological diversity. In these cases, the Biodiversity Convention could be read to require the practice of parties under other agreements to come into conformity with its conservation and sustainable use requirements. This conclusion is consistent with the Biodiversity Convention's context for sustainable use: it is not a license to use a species without regard for its survival; it is not a requirement that all species that could be used must be used; and it is not a requirement that all possible uses for a given species must be permitted. To the contrary, the sustainable use requirement is a strict obligation, accompanied by comprehensive planning and monitoring, to ensure the long-term survival of a species.

III. The Biodiversity Convention Is Intended to Complement and Reinforce Existing Conservation Agreements

The Biodiversity Convention explicitly states that it is intended to complement and reinforce existing conservation agreements, not to interfere with them. The Preamble states the desire "to enhance and complement existing international arrangements for the conservation of biological diversity and sustainable use of its components."[40] Thus, the Biodiversity Convention requires Parties to cooperate as far as possible and as appropriate on "matters beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity."[41] They must cooperate on these matters "through competent international organizations" where appropriate.[42] Moreover, Parties are required to promote scientific and technical cooperation "through the appropriate international and national institutions."[43] Clearly, the Convention acknowledges that the Parties should rely on previous agreements and their institutional structures to implement their obligations under the Biodiversity Convention.

International cooperation is an essential component of implementing the Biodiversity Convention's obligations. The Biodiversity Convention covers a tremendous range of human activity and biota. To adequately regulate this range of human activity and biota, the Biodiversity Convention should coordinate with and support (and be supported by) rather than compete or conflict with other conservation agreements. The Biodiversity Convention should defer to existing institutions and agreements where they have demonstrated the ability to ensure the conservation and sustainable use in specific contexts. To start anew makes no sense.

For example, the Biodiversity Convention requires Parties to protect threatened species.[44] The permit process of CITES is designed to prevent species from becoming threatened and regulate international trade in threatened species. This could be a model for implementing domestic permit systems or regulating other uses of biological diversity. The Biodiversity Convention requires parties "to promote the protection of ecosystems, natural habitats, and the maintenance of viable populations of species in natural surroundings."[45] The Ramsar Convention already protects wetlands and also allows for their sustainable use.[46] The World Heritage Convention protects unique natural sites.[47] Although not specifically tailored to protecting habitats and ecosystems, it can help achieve that purpose.[48] In addition, many international agreements already have mechanisms for technical cooperation relating to specific regional concerns or specific species of concern.[49] As the drafters of the Biodiversity Convention recognized, there is no need to reinvent everything.

A. Synergy for Sustainable Use Rules

The Parties should rely on other agreements to implement rules for sustainable use. The Biodiversity Convention requires the Parties to develop regulations and to "provide conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components."[50] The Parties must ensure that specific uses are sustainable and that the use of specific resources is sustainable.[51] The Biodiversity Convention, recognizes that significant reductions of biological diversity due to unsustainable human activities must be stopped.[52] Like the other documents to emerge at the United Nations Conference on Environment and Development (UNCED), it also recognizes that existing uses must become sustainable and that proper planning accompany new uses to ensure that they are sustainable.[53]

The Biodiversity Convention's call for a new, sustainable future and rules to implement sustainable use applies equally to international commercial trade in wildlife. International commercial trade in wild-caught species often is conducted in an unsustainable manner, and can be

categorized generally as one of the "unsustainable patterns of production and consumption" that governments agreed to reduce and eliminate in Principle 8 of the Rio Declaration. For example, tigers and rhinos are near extinction due to trade in their parts for Asian medicines, and many bird species are near extinction due to the market for pets.[54] African elephant populations declined from 1.3 million in 1979 to 600,000 in 1989 due to over-exploitation from international commercial trade.[55] In addition, the major fisheries of the world are collapsing, according to the United Nations Food and Agriculture Organization.[56]

Thus, the Biodiversity Convention calls on Parties to reaffirm their commitments under CITES, not avoid them, to implement rules for the sustainable use of species. The trade restrictions of CITES represent the sustained work of the international community over two decades. CITES now is comprised of 128 parties, many of which have contributed their management experience and scientific research and expertise to the long process of elaborating and testing its requirements. Because of CITES's achievements, the Biodiversity Convention itself does not need to devote major resources to analyzing the impact of international trade on endangered species or the need for regulation. This is exactly the type of international cooperation contemplated and required by the Biodiversity Convention.

B. Synergy to Strengthen Existing Conservation Agreements

Similarly, the Biodiversity Convention can help the parties to CITES implement CITES. Nothing in CITES requires the parties to develop a national strategy to ensure that trade is sustainable. The permit process of CITES looks at individual shipments on a case-by-case basis. In accordance with Article IV(3) of CITES, a party also can establish an annual export limit for specimens of an Appendix II species and aviod inspection of individual shipments, provided the limit is not exceeded. These provisions could be integrated perfectly in a national strategy[57] or management plan[58] for the conservation and sustainable use of species, as required by the Biodiversity Convention. Management plans also could include licensing of all traders of wildlife and those who capture wildlife.[59]

In this way, CITES and the Biodiversity Convention complement each other and make each agreement more effective. CITES protects listed species that are or may be threatened with extinction. The Biodiversity Convention affirms the need for CITES and requires parties to take steps to ensure that species are conserved and used sustainably. This synergy between CITES and the Biodiversity Convention is exactly the type of synergy contemplated in the Preamble to the Biodiversity Convention: "Desiring to enhance and complement existing international arrangements for the conservation of biological diversity and sustainable use of its components."[60]

The Ramsar Convention offers another good example of how the Biodiversity Convention can strengthen and complement other agreements. Many migratory birds, particularly waterfowl, require wetlands throughout their migration. The Ramsar Convention provides a mechanism for countries to conserve wetlands, particularly for migratory species. At the same time, it allows parties to sustainably use wetlands. The parties have never elaborated on Ramsar's planning requirements, and they remain under-developed. The comprehensive planning and monitoring requirements of the Biodiversity Convention offer a means to strengthen and support the obligations of the Ramsar Convention.

Part II — Recommendations to Achieve the Conservation and Sustainable Use Objectives of the Biodiversity Convention

The discussion in Part I demonstrates that the Biodiversity Convention and certain existing conservation agreements such as CITES are mutually reinforcing and not in conflict. The Biodiversity Convention establishes a Comprehensive framework of obligations

concerning sustainable use and conservation, while agreements such as CITES implement in more detail specific obligations within that framework. The following discussion defines specific ways that other agreements can be used to implement the Biodiversity Convention. It also makes specific recommendations to the Parties to the Biodiversity Convention concerning steps to implement the Biodiversity Convention through other agreements to achieve the Convention's objectives of conservation and sustainable use.

A. Interpreting the Obligation of Sustainable Use

The text of the Biodiversity Convention makes clear that present unsustainable uses of biological resources must be modified or terminated to make them sustainable, not to maximize the commercial use of biological diversity. As described fully in Part I, the Biodiversity Convention requires parties to create the appropriate conditions — economic, legal, management and scientific conditions — to ensure that current unsustainable practices become sustainable.[61]

Other international agreements such as CITES can assist the parties to make current uses of species sustainable. For example, the prohibitions against commercial trade under CITES and the moratorium against commercial whaling by the IWC provide useful mechanisms for stopping unsustainable uses until populations can recover and adequate scientific information is developed to ensure that the use can be sustainable.

The agreements, however, do not simply prohibit trade. They provide the regulatory mechanisms for ensuring that trade does not become unsustainable. CITES creates the regulatory mechanism for achieving sustainable use of species in international commercial trade. Although CITES regulates only one type of use, it offers a model for achieving sustainability for other types of uses as well. For example, CITES requires parties to implement a permit system which requires the exporting country to find that trade in an Appendix I or II species will not be detrimental to its survival. This "no detriment finding" is the equivalent of a "sustainability" finding. Similar permit programs could be implemented for domestic commercial trade and other types of trade.

> ***Recommendation***
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> ***The Parties should identify all provisions of other agreements, such as the permit provisions of CITES and the moratorium under the IWC, that help ensure the sustainable use of components of biological diversity. The Parties also should identify how these provisions of other agreements might be applied to other uses of biological diversity. For example, the CITES permitting system is highly relevant to discussions on standards for certification of timber as sustainably produced.***

> ***Recommendation***
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> ***The Parties should recognize that not all components of biological diversity should be used due to a species keystone role in an ecosystem, for ethical reasons, or other reasons which the Parties enumerate. The Parties also should recognize that not all uses of a species must be permitted.***

B. Planning for Sustainable Use

To make current uses sustainable, or to ensure that new uses will be sustainable, the Biodiversity Convention creates a comprehensive planning process. For example, Parties are required to develop, so far as possible, national plans for the conservation and sustainable use of biological diversity, and to integrate the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programs and policies. This planning structure recognizes that sustainable use does not happen without careful consideration of the management, legal and scientific issues.

Scientists, lawyers, and managers, including those at the International Union for the Conservation of Nature, have started to analyze the types of planning that are necessary to ensure sustainable use. Any intended use of a species requires an effective management system and legal framework based on sound scientific information. The management system must be able to respond quickly to changing conditions and information. It also must define clearly the rights and obligations of all groups involved in the use of a species, and it must require a mechanism for the equitable sharing of benefits from the use.[62]

The legal framework must establish clearly the duties of the governmental authorities at the local and state level. The information requirements (listed below) should be enacted into law, as well as the precautionary principle. The legal system also should provide management authorities with the land-use tools necessary for protecting species, including corridors, buffer zones, and other protected areas, as well as economic incentives to encourage landowners to participate in conservation, such as easements and purchasing agreements.

In addition, no intended use should proceed without extensive biological information concerning a species. Without such knowledge, one cannot assure that the use will be sustainable. To ensure that the use of a species is sustainable, the following information is required:[63]

1. Population Size and Range. Basic information on the size and structure of a population is a necessary condition to establish a harvest quota, because the effects of a harvest on a population cannot be identified without such knowledge. A species' range and changes in the species' range also must be known to understand the habitat requirements of the species as well as to define management areas.

2. Habitat Requirements. A species' habitat requirements, including breeding and feeding requirements, must be determined and assessed seasonally, because changes may occur due to availability of food, seasonal migrations or other factors. This information — diet, habitat requirements and ranging behavior — is "critically important to assess the of landscape-level processes on population viability."[64]

3. Resilience to Human Disturbances and Habitat Changes. Human activities can have direct and indirect effects on a species. For example, human visitation of birds' nests sometimes attract predators to the nests of birds and cause the bird to abandon the nest. Habitat fragmentation can alter the composition of a community.[65] Grazing and agriculture changes vegetation patterns can affect the availability and abundance of food for species.[66] Knowledge of a species' resilience to human activities, including habitat loss and fragmentation, is needed to properly estimate population trends.

4. Demography. Demographic information of species, including birth rates, mortality rates, age of first and last breeding, is necessary to determine the rate at which a population is increasing or decreasing.

5. Interspecific Relationships. Information is also needed concerning the relationships between the target population and associated species and communities (such as predators, parasites, prey,

seed dispersers, pollinators, epiphytes, competitors, disease organisms). That is, how will use of one population affect other populations and species?

6. Human Factors. Before starting a commercial or other use of a species, it is essential to know the social, cultural and economic factors that might affect the use, such as changes in markets or technology, elasticity of demand and supply, the degree to which markets can be manipulated, economic and property relationships, power and authority relationships, and values and perceptions.

Recommendation

The Parties should identify the economic, management, social and legal conditions which characterize the sustainability or unsustainability of a use and a species or resource. The Parties also should identify uses, particularly consumptive uses (such as inter-national commercial trade, eco-tourism and subsistence uses) of species which are sustainable. The financing mechanism could fund this study. This recommendation also implements the Convention's call for research which contributes to conservation and sustainable use.

Recommendation

The Parties, working with nongovernmental organizations, should develop a protocol that outlines the minimum requirements for a national framework for sustainable use, including (1) the necessary elements of a legal system; (2) the necessary elements of a management program; and (3) the scientific information necessary before a use can begin.

C. Identifying and Monitoring Uses for Conservation and Sustainability

In addition to the general planning requirements for conservation and sustainable use, the Parties also must identify[67] and monitor[68] components of biological diversity for its conservation and sustainable use. By identifying which components of biological diversity might be more suitable for sustainable use, the Parties can detect problems with uses of biological diversity that need to be addressed. The identification process then allows the Parties to focus their efforts on making uses of these components sustainable. Uses that are unsustainable should be significantly reduced or prohibited, if appropriate. The monitoring system is designed to ensure that components of biological diversity, in fact, are being conserved or sustainably used. It also should be able to recognize when particular uses are becoming unsustainable.

Parties can use the reporting requirements of other agreements to help them in the identification and monitoring duties. For example, parties to CITES are required to submit trade data concerning imports and exports of Appendix I and II species.[69] These data might identify a species that is traded heavily and in need of additional monitoring. Additional monitoring might include closer scrutiny of requests for import and export permits. The

International Convention for the Conservation of Wetlands of Importance (the Ramsar Convention) requires parties to develop criteria to identify wetlands of international importance and to identify potential wetlands for protection.[70] At least for international commercial trade and wetlands, the mechanisms for implementing the reporting and identification provisions of the Biodiversity Convention already exist.

> ***Recommendation***
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> ***The Parties should identify all reporting requirements of other international agreements to determine the extent to which these can be used to fulfill the identification and monitoring obligations under the Biodiversity Convention.***

D. Cooperation Among Parties

The Parties are required to cooperate with each other and with other international organizations on matters "beyond national jurisdiction and on other matters of mutual interest" for the conservation and sustainable use of biological diversity.[71] This provision relates to migratory species, populations of species that straddle jurisdictions and move in and out of jurisdictions, international trade, global ecological processes, enforcement, and other issues that require cooperation among nations. Part I, Section III provides examples of how other international treaties can be used to implement the Biodiversity Convention, including the use of the CITES permit structure to regulate uses of species other than for international commercial trade. It also describes the ways that other agreements benefit from the provisions of the Biodiversity Convention.

> ***Recommendation***
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> ***The Parties should identify provisions of the Biodiversity Convention and other international agreements which complement each other, and develop mechanisms for coordination between the Biodiversity Convention and the institutions of the other agreements.***

E. Environmental Impact Assessment

Environmental impact assessment (EIA) has become a very useful mechanism to ensure that planners have essential information concerning the environmental impacts of a proposed project. Usually, the laws of a country will require the development of alternatives and mitigation measures. Similarly, the Biodiversity Convention requires Parties to conduct EIA for proposed projects that "are likely to have significant adverse effects on biological diversity" to avoid or minimize such effects.[72] In addition, the Biodiversity Convention requires Parties to identify categories of activities that harm biological diversity[73] and to regulate those activities.[74]

Recommendation

Because international commercial uses of biological diversity usually lead to significant population declines for species, the EIA process of each country should extend to existing commercial uses of species. If significant adverse effects or unsustainable effects or identified, the country should implement measures to avoid or minimize the adverse or unsustainable effects. This is consistent with the Biodiversity Convention's goal to place existing uses on a sustainable path. Moreover, each proposed new commercial use of a species should be subject to the EIA process, because these activities are likely to harm biological diversity without adequate and effective planning.

F. Technical and Scientific Research

The Biodiversity Convention calls upon the Parties to promote and encourage research that contributes to the conservation and sustainable use of biological resources.[75] In addition, Parties should cooperate with each other to promote international technical and scientific cooperation, and develop a clearinghouse mechanism to promote this cooperation.[76]

Recommendation

The Parties should focus their research and technical cooperation on finding existing projects that might be sustainable and mechanisms for making other uses sustainable. Research and cooperation should not focus on developing new uses of biological diversity. Also, the clearinghouse should function as a mechanism for gathering and distributing information.

G. The Financing Mechanism

The Biodiversity Convention requires each Party to provide financial support and incentives to achieve the objectives of the convention. Also, developed country Parties must provide new and additional resources to enable developing countries to meet the costs of implementing the Biodiversity Convention through a financing mechanism.[77] The Global Environmental Facility, the interim financing mechanism, will distribute funding to developing countries based on criteria established by the Parties. Proper distribution of funding can have enormous benefits for achieving the goals of conservation and sustainable use of biological diversity.

Recommendation

In funding projects concerning sustainable use, the Parties should disburse funding only for making existing uses sustainable, including support for the development of national plans and research into the legal, management and scientific elements required to ensure that a use is sustainable. One specific project that could be funded include funding to properly implement the "no detriment findings" of CITES in those countries which lack the funding to do so. This would directly effect the sustainability of trade in wildlife. Due to the current predominance of unsustainable uses, the funding should not be used to support new uses.

Endnotes

1. Convention on Biological Diversity, June 5, 1992, *reprinted in* 31 I.L.M. 818 (1992) [hereinafter "Biodiversity Convention"].

2. Convention on International Trade in Endangered Species (CITES), Mar. 3, 1973, 27 U.N.T.S. 243.

3. Biodiversity Convention, *supra* note 1, at Preamble, para. 22; art. 5 and art. 18.

4. *Id.* at art. 8(k) and art. 1. Article 8(k) states: "Each contracting Party shall, as far as possible and as appropriate, ... develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and population."

5. The Biodiversity Convention contemplates the conservation and sustainable use of, among other things, ecosystems and habitats (art. 8(d)), threatened species (art. 8(k)), components of biological diversity in *ex situ* collections (art. 9), and genetic resources (arts. 15, 16, and 19).

6. Biodiversity Convention, *supra* note 1, at art. 22.

7. Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, Feb. 2, 1971, *reprinted in* 11 I.L.M. 969 (1972) [hereinafter the Ramsar Convention].

8. WORLD CONSERVATION MONITORING CENTRE, GLOBAL BIODIVERSITY: STATUS OF THE EARTH'S LIVING RESOURCES 475-477 (1992).

9. Biodiversity Convention, *supra* note 1, at art. 2.

10. *Id.* at art. 6.

11. *Id.* at art. 7.

12. *Id.* at arts. 8(d) and (k).

13. *Id.* at Preamble, para. 22; art. 5 and art. 18.

14. *Id.* at art. 1. The other primary goal of the Biodiversity Convention is to ensure the equitable distribution of benefits from the use of genetic resources. *Id.* at arts. 1, 15, 16, and 19.

15. *Id.* at art. 2.

16. *Id.* at art. 7(a).

17. Parties are required to develop national plans for the conservation and sustainable use of biological diversity and to integrate the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programs and policies. *Id.* at art. 6.

18. *Id.* at art. 14.

19. Parties are required to provide "the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components." *Id.* at art. 8(i). Also, Parties are required to "adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity. *Id.* at art. 11.

20. *Id.* at art. 7(b).

21. The Biodiversity Convention states "that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat." *Id.* at Preamble, para. 9.

22. *Id.* at art. 2. *See also* International Union for the Conservation of Nature, Guidelines for the Ecological Sustainability of Non-consumptive and Consumptive Uses of Wild Species, Annex 1 to Addendum 1 to General Assembly Paper GA/19/94/3, para. 7, 19(c) [hereinafter IUCN Guidelines for Ecological Sustainability]. There are three commonly cited elements of sustainability: value to the environment, equity, and futurity. *See, e.g.*, DAVID PEARCE, ANIL MARKANDYA, EDWARD B. BARBIER, BLUEPRINT FOR A GREEN ECONOMY 2-3, 173-185 (1989).

23. IUCN Guidelines for Ecological Sustainability, *supra* note 22, at para. 50. The Guidelines state that before setting sustainable use levels, a management plan must be developed. In addition, sustainable use levels must account for unforeseen factors, unpredictable events, and uncertainty of information. *Id.* at para. 52. The key element to the Guidelines is that they information must be gathered before initiating the use.

24. The Preamble to CITES recognizes that species are irreplaceable parts of the natural systems, but that they also have economic value. To ensure that species and their ecological and economic value are protected for this and the generations to come, species must be protected from over-exploitation. CITES, *supra* note 2, at Preamble. This language of CITES mirrors that of the Biodiversity Convention in its Preamble, its objectives, and its definition of sustainable use. Biodiversity Convention, *supra* note 1, at Preamble, paras. 1, 6, and 8; arts. 1 and 2.

25. "Each Contracting Party shall, as far as possible and as appropriate, ... develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species." Biodiversity Convention, *supra* note 1, at art. 8(k).

26. CITES, *supra* note 2, at art. II(2)(a).

27. *Id.* at art. IV(2)(a).

28. Many parties to CITES do not have adequate implementing legislation. A report prepared for the Ninth Meeting of the Conference of the Parties reviewed the legislation of 81 parties. It found that 27 of the 81 parties did not have legislation adequate to implement CITES. Only 15 Parties had legislation that generally met the requirements for implementation of CITES. CITES, National Laws for Implementation of the Convention, Doc. 9.24, in THE PROCEEDINGS OF THE NINTH CONFERENCE OF THE PARTIES (1994).

55. Andrew Dobson and Joyce Poole, *Ivory Poaching and the Viability of African Elephant Populations*, (undated manuscript) (submitted July 6, 1991, to the U.S. Fish and Wildlife Service) citing Iain Douglas Hamilton, Report to the Ivory Trade Review Group (prepared for the Seventh Conference of the Parties to CITES).

56. The Tragedy of the Oceans, THE ECONOMIST 21 (Mar. 19, 1994).

57. Biodiversity Convention, *supra* note 1, at art. 10(a).

58. *Id.* at art. 7.

59. The parties to CITES have recommended that traders in captively bred and artificially propagated species be registered or licensed. CITES, Resolution of the Conference of the Parties, 8.15, in PROCEEDINGS OF THE EIGHTH MEETING OF THE CONFERENCE OF THE PARTIES (1989) (for captively bred specimens); CITES, Resolution of the Conference of the Parties, 9.18 and 9.19, in PROCEEDINGS OF THE NINTH MEETING OF THE CONFERENCE OF THE PARTIES (1994) (for artificially propagated specimens). Parties have not recommended registration for traders of wild-caught species.

60. Biodiversity Convention, *supra* note 1, at Preamble, para. 22.

61. The Convention requires Parties to "endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components. Biodiversity Convention, *supra* note 1, at art. 8(i). It also requires Parties to "adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity. *Id.* at art. 11.

62. IUCN Sustainable Use Guidelines, *supra* note 22, at paras. 45-47.

63. Steven R. Beissinger and Enrique H. Bucher, *Sustainable Harvesting of Parrots for Conservation*, in NEW WORLD PARROTS IN CRISIS: SOLUTIONS FROM CONSERVATION BIOLOGY 73-115 (eds. Steven R. Beissinger & Noel F.R. Snyder, 1992); IUCN Sustainable Use Guidelines, *supra* note 22, paras. 29-49.

64. Beissinger and Bucher, *Sustainable Harvesting of Parrots for Conservation*, *supra* note 63, citing Michael Soulé, ed., VIABLE POPULATIONS FOR CONSERVATION (1987).

65. A.D. Johns, *Species Conservation in Managed Tropical Forests*, in TROPICAL DEFORESTATION AND SPECIES EXTINCTION (T.C. Whitmore and J.A. Sayer eds., 1992), citing N.M. Collins, *The Effect of Logging on Termite* (Isoptera) *Diversity and Decomposition Processes in Lowland Dipterocarp Forests*, in TROPICAL ECOLOGY AND DEVELOPMENT vol. 1 (no page given) and R.J. Pine and D.E. Wilson (unpublished data) (composition of bats changed by fragmentation in Panama).

66. Beissinger and Bucher, *Sustainable Harvesting of Parrots for Conservation*, *supra* note 63, citing D.A. Saunders, *The Effect of Agricultural Clearing on the Breeding Success of the White-tailed Black Cockatoo*, EMU 77:180-184 (1977).

67. *Id.* at art. 7(a).

68. *Id.* at art. 7(b).

69. CITES, *supra* note 2, at art. VIII(6) and (7).

70. FRAMEWORK FOR THE IMPLEMENTATION OF THE CONVENTION AND PRIORITIES FOR ATTENTION 1991-1993, (Doc. C.4.12)(Rev.). *See also* Ramsar, *supra* note 7, at arts. 2-4.

71. Biodiversity Convention, *supra* note 1, at art. 5.

72. *Id.* at art. 14

73. *Id.* at art. 7(c).

74. *Id.* at 8(l).

75. *Id.* at art. 12.

76. *Id.* at art. 18.

77. *Id.* at art. 20.