

ENDANGERED SPECIES

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Summary

Since 1973, CITES has been the main focus for international policy concerning endangered species. Its effectiveness has been constrained by its limited focus on interstate trade and neglect of other threats such as fragmentation of habitat. Under CITES, trade is prohibited for the most endangered "Appendix I" species while allowed under controlled conditions for less endangered "Appendix II" species. Precautionary pressures to move species to Appendix I proved problematic as it removed the controls available under Appendix II and also in a number of cases led to alternative land uses accelerating habitat fragmentation. This was ameliorated by the adoption of a 'significant trade process' whereby additional undertakings would be required for a

species to maintain Appendix II status. This article starts by considering the nature of endangerment and policy conflicts between those who consider market incentives are necessary to any strategy and those feel they corrupt any strategy. Consideration is also given to the concerns of animal welfare and indigenous peoples. Following a review of relevant Conventions, CITES is examined firstly in terms of its mechanisms and then in the context of International, Regional, Domestic and Local implementation. A concluding view of current and future challenges is also given.

1. Introduction

Any assessment of international policies supporting endangered species requires a judgement on two issues. First, it is not enough for policies to be effective in the objectives they pursue, what is vital is that those objectives provide an effective response to that which needs to be remedied. If policies address those challenges which are easiest to counter rather than those posing the most threat, resources will be misapplied and that which needs to be done will not be done. Secondly, one cannot avoid taking a view on whether market incentives form an aid or impediment to the survival of endangered species.

Significant credit should also be given to the contribution that those involved with CITES have made to policy development since 1973. Their ingenuity and determination has transcended a narrow mandate and liberated a breadth of resources and policy approaches that have enabled a sense of engagement to be maintained. Outstanding problems may remain, but CITES provides reminders to other multilateral efforts that it is available intellectual capital that drives results and the design of a convention can only help or hinder what can be achieved.

Before assessing the effectiveness of international policy and the extent to which it supports or hinders optimum conservation strategies, it is important to clarify two issues. These are the pressures that promote extinction and the various interests that compete in seeking to influence the design of remedial policies.

2. The Nature of Endangerment

2.1. What is extinction?

Species are defined by their ability to interbreed freely under natural conditions and extinction of a species starts when its numbers fall to a level below which decrease in reproductive capacity becomes irreversible. Thereafter, extinction is traditionally recorded in the absence of any sightings for a period of 50 years or in the terms of the IUCN "when there is no reasonable doubt that the last individual has died." This is usually preceded by exhaustive surveys throughout the known range of a species.

Loss of a species is not only significant in itself but also because it removes a part of an ecosystem on which other species, including humans, may rely. The compounding nature of this threat emphasizes the need to consider extinction of both local and regional stocks. Although these can often be brought under observation or protection as

sub species, they present difficult decisions in the face of limited resources. Rarity of sightings by itself may indicate no more than the fringe of a species range, or a specialist niche in an ecosystem. Accordingly without proper monitoring and research programs there is danger of intervention policies confusing rarity with decline and of misallocating resources to the fringes of a range.

Our view of what is in danger of extinction has never been better. The IUCN maintains a "Red List" (www.redlist.org) of species causing concern and an assessment of current status and attendant threats. This is maintained by the efforts of over 100 specialist groups of the IUCN Species Survival Commission (SSC) involving a network of some 7 000 experts and partner organizations. By 1996, all known bird and mammal species had been assessed enabling a baseline from which future trends could be monitored against a range of categories: extinct (extinct, extinct in wild); threatened (critically endangered, endangered, and vulnerable); and lower risk (conservation dependant, near threatened, least concern). Each category has a range of criteria, any one of which may trigger appropriate listing. These include population size, area and degree of population distribution, rate of decline, and degree of fragmentation. Assessments are open to challenge as to categorization, criteria, and supporting information which itself is under continual review. A consultative exercise has been in progress since 1997 to iron out remaining taxonomic problems (i.e., whether certain subspecies are in fact separate species). Given the huge number of known species, assessments have had to be selective and future plans have a remedial focus on evaluating more amphibians, reptiles, freshwater fish, and marine species and invertebrates. Eventually, it is hoped to reevaluate a species every 10 years.

2.2. What are the Threats?

While it may be said that extinction is a natural phenomena and 99% of all species that have ever lived are now extinct, there is no doubt that human activity has been significant. There is increasing evidence that there was never a golden age when humans naturally lived in harmony with their environment and that the arrival of humans in an ecosystem quickly outstrips other trends. Currently, population growth, industrialization, and globalization have dramatically increased the cause for concern.

The Biodiversity Convention (CBD) identifies the most significant threat as habitat depletion resulting from changes in land use and infrastructure demands in response to macroeconomic pressures. This leads to range fragmentation and disturbance to breeding patterns and food chains. Second is displacement by alien species often accompanied by natural predation, competition for food, breeding, and nesting sites. This is followed by excessive hunting. Wild animals have been a traditional source of protein for poor communities particularly during drought and famine when domestic meat is scarce. However, increasing pressure on land use and lack of alternative income has driven such "bushmeat" activities to unsustainable levels. As larger traditional game has been reduced, previously ignored species such as zebra, hippo, great apes, and primates are now under threat. Ecosystem pollution from human activity is also a major concern.

Given these more pressing threats, why did CITES address itself to international trade? A major explanation lies in the structure by which the international system is organized. Put simply, while other threats fall predominantly within the territorial sovereignty of states and thus out of international reach, trade crosses borders and can be regulated, if not by the state of production, then by the state of consumption. Additionally, although not being a prime threat, trade is nonetheless a critical threat to some species. A decline in a species' density normally neutralizes its market viability as the increasing time and associated costs of location converge towards its market price. However, in the case of "status symbols," an exponential increase in value relative to decline will result. Fortunately, providing states have the will, and a number have had to be coerced, the markets for such items are confined to affluent groups on which the media and enforcement agencies can focus.

2.3. What Conditions Responses?

The preamble of CITES defines its objectives as being "to protect wild fauna/flora for humankind as national heritage of peoples and states." While "humankind" is flexible enough to incorporate the transgenerational aspect of sustainable development, there is no guidance on what contributes to national heritage. Accordingly both in application and implementation CITES has been highly contested between those who wished to use the spirit generated by UNCED to move human needs to the center of policy and those who believe that every expression of life should be protected equally. This has been characterized as "whether animals constitute commodity or taboo." However, if there is common ground it is that species represent a unique expression of life; that biodiversity of uniqueness is a resource one should guard against depleting; and that land management is key to any effective policy. Although the argument is thus more as to means than ends, the vigor with which it is pursued is a permanent feature of endangered species politics. In this context, the perceptions of those confronted with responsibility for enclosed parks are often different from those who have to deal with free-range species. The former tend to favor "preservation" of a species by reducing its market value in order to reduce commercial pressures on their ability to survive. The latter favor market-based "conservation" as a way to maximize the resource value of a species and thus the ecosystem by which it is supported. Views polarize accordingly both within and among countries with species being either "mined" or the subject of "sustainable stock management" depending on perspective.

Not all subsistence communities have survived, but those that have endured have done so through finding a sustainable niche in their ecosystem. Such niches are generally fragile and vulnerable to changing environmental, social, and economic pressures. As communities move from subsistence, the availability of wildlife makes it an easy resource to commodify and thus provide the initial stimulation to development. Decorative ivory, hides, pets, pharmaceuticals, and wood become integrated into regional and then international markets. Not only does this render them subject to the volatile demands of consumption but also means that any restrictions on such trade will induce alternative land use. Not everywhere is suitable for development into game parks, and in such circumstances the most common option is conversion to agriculture. Unfortunately, this not only encourages habitat depletion, but also transforms wild

species into "vermin." It is this dynamic which has driven the advocates of market-based conservation in their belief that monitored trade conducted by local communities is the best strategy for providing incentives to maintain populations and their ecosystem. However, high start up costs, problems of what is, or should be accepted as, a local community, and the related potential for lack of accountability, particularly over allocation of benefits, provide many challenges.

The belief that our own humanity is enhanced or diminished by the way in which we treat our "fellow creatures" is a strong challenge to the human exploitation of animals. In industrialized states, there is an influential view that living creatures also act as icons. They are seen either as embodying the natural freedom which we have forsaken for a more material way of life, or as a wondrous diversity representing a transcendent creativity of which humanity is but a part, and potentially the part most likely to place the whole structure at risk. The very status of "endangered" also encapsulates the cost and hubris of human progress. Looked at from these viewpoints, trade and the profit it seeks to make, is perceived as corroding conservation by raising unattainable expectations, stimulating demands on vulnerable resources, and contributing to population growth thereby intensifying ecosystem pressures. On the other hand, consumption of meat and use of animal derivatives such as leather is considered a norm in nearly all societies. In developed societies with complex networks of distribution, the link between production and consumption can be far removed and even dislocated entirely as attitudes to animals become blunted at one end by mass production and heightened at the other by a dissociation of image from reality. By contrast, communities surviving at the margins tend to perceive the taking of animal life as part of the continuance of human life. Differences of perspective lead to differences of ethical values that may be irreconcilable. The collapse of the Inuit sealskin market in the 1970s and 1980s was a consequence of pressures within the US and EU that saw the moral dignity of seals as "endangered" by the inhumane suffering inflicted by their killing. By contrast, the killing of seals was defended by the Inuit Circumpolar Conference as being done in a way which showed respect for the seal, served a purpose in providing food and clothing, and unlike the production of fake fur was not environmentally polluting. There was no meeting of minds, but one consequence of the collapse of the market, and with it the way of life of many Inuit communities, was an explosion in seal numbers, which it is argued has subsequently posed severe challenges to the balance of Arctic biodiversity. This serves as an illustration both of the need for caution when appraising human participation within the ecosystem and also how much easier it is to displace, rather than resolve, a problem.

3. Regime Development

3.1. CITES

The control of fragile fishery and seal stocks provided the basis of a number of competing jurisdictional claims during the nineteenth century. However, the first multinational initiative was the London Convention of 1900, which aimed to ensure "the conservation of various species of wild animals in Africa that are useful to man or inoffensive." Although falling short of ratifications needed for entry into force, it

provided a platform for continuing debate until efforts were renewed in 1933 with a convention "relative to the preservation of fauna and flora in their natural state." The objective of both conventions was the harmonization and improvement of administration in the colonial big game hunting grounds. As a consequence, species depletion was seen within the context of the threat hunting with spear and snare posed to hunting with sporting rifle. Although the 1933 convention did enter into force, lack of standing institutions to prepare and implement decisions negated any chance of effective implementation and with decolonization the convention became a dead letter. However, its linking of mandatory export licenses to a listing of threatened species remained key to future strategies. Regional conventions followed in 1942 and 1968 organized by the Organization of American States and Organization of African Unity, respectively. However, once again in the absence of permanent administrative mechanisms, implementation reporting, and available resources on which to draw, neither was able to develop as a functioning convention.

Throughout the 1950s and 1960s, professional and media interest rendered increasingly visible evidence of both the rate at which many species were declining and the absence of effective remedial policies. This drove an increasing anxiety, particularly in the developed world, that newly independent states not only lacked the capacity to protect their wildlife resources, but in seeking development were also under irresistible pressure to permit resources to be depleted through commercial exploitation. It was in this context that the Washington Conference of 1973 was convened at which the text of CITES was adopted.

The CITES text was largely prepared by the US and reflected two main influences. The first were the views of the IUCN membership, which had adopted regular resolutions since 1963 calling for a convention and had produced various drafts. The second was US policy, which had traditionally regarded restricting consumer demand as the most effective protection of endangered wildlife, whether or not taken legally in their country of origin. However, as previous experience had shown something more was needed. This was provided by the "high level" multilateral atmosphere of the World Conference on Environment at Stockholm in 1972 which generated the political will necessary for CITES to be adopted and achieve sufficient ratifications to enter into force in 1975.

Although CITES has occupied a central role, other Conventions have also been influential either in relation to specific species or within the context of ecosystem management and it is to these we now turn.

3.2. International Whaling Convention

This was established by the International Whaling Commission (IWC) to provide for conservation of whale stocks as a way of stabilizing the future development of the whaling industry. Its policies aimed at conserving and rebuilding stocks using a selection of scheduled measures including designation of general and seasonal moratoria, quotas, and sanctuaries.

Each party is required to file catch reports and other information for collating by the Convention's secretariat for the annual meeting of the parties. Here, each party is represented by a commissioner and measures can be adopted on the affirmation of 75% of commissioners voting. Once adopted, parties must implement a measure unless a reservation is filed with the secretariat at least 90 days prior to the measure taking effect. IWC observers monitor compliance and infractions are referred to ad hoc working groups for investigation and report. The productivity of the annual meetings are enhanced by prior meetings of various subcommittees, including a scientific subcommittee that provides views on stock status, and a subcommittee dealing with aboriginal whaling.

An "Active Management Strategy" was adopted in 1975 to bring stocks to the level consistent with maximum long-term harvest yield. This reflected a view that a sustainable cycle of regeneration could be achieved naturally by an optimum mortality rate triggering less competition for food, higher pregnancy rates, and earlier maturation. However, feasibility was impeded by lack of scientific data on stock numbers and a "Revised Management Procedure" was adopted in 1994, aimed at monitoring individual stocks and stabilizing the risks to which they were exposed. An interim moratorium was adopted but consensus as to when and to what extent this could be lifted has yet to be achieved. This owes more to political than scientific reasons and reflects the changing membership balance as nonwhaling states joined the IWC in response to coordinated campaigns to protect whale welfare. In the meantime, research continues into the technicalities of tracking stock movements, genetic analysis, and collateral impacts of influences such as global warming, pollution, and tourism.

An overlap with CITES exists to the extent that any whale species are endangered. Although CITES has a policy of consistency with IWC resolutions, this has become increasingly tenuous concerning IWC resolutions adopted against the advice of its scientific subcommittee and in recent years Japanese and Norwegian efforts to recognize recovery of grey and minke whale stocks to commercially sustainable levels have only narrowly been defeated. In the meantime, both countries continue to set their own coastal whaling quotas by use of formal reservations. The IWC have allowed quotas to support aboriginal substance whaling but these have not been extended to other dependent communities, nor do they allow for onward trade. Although this policy reflects a fear that trade will fuel increasing demand it conflicts with a basic premise of sustainable development that there is a right to use sustainable natural resources to trade into a higher standard of living.

The IWC web site (www.marine.gov.uk) shows current population estimates and the trend is generally good with a number of severely depleted species showing signs of improvement. However, some regional stocks remain extremely vulnerable.

3.3. The Biodiversity Convention

The Biodiversity Convention (CBD) was signed at UNCED and entered into force in 1993. The objective is sustainable conservation of biodiversity based on community control of resources and the sovereign rights of States to determine access to such

resources. It covers the whole range of diversity from genetic resources to species to ecosystems, recognizes the multiplicity of threats endangering species, and places a new emphasis on nationally developed biodiversity strategies and action plans. In implementing the UNCED consensus of integrating human development into environmental protection, the CBD has not only raised the challenge of resolving priorities between the two but also exposed the conflicting claims underlying development. For example, where protected areas have been used for tourist revenue the allocation of benefits between local communities and those involved in the tourist industry can be highly sensitive, particularly where the tourist demand to see wildlife in its "natural" environment has justified the removal of functioning local communities.

3.4. Other Conventions

As the following illustrate, other conventions focus either on management of specific ecosystems or on the needs of a specific constituency of species. The secretariat of the Ramsar Convention (1971), concerning conservation of wetlands, maintains a close relationship with the IUCN and gave early recognition to "wise use" as a central element of conservation strategy. Here, the aim is to keep the ecosystem in balance by allowing sustainable human exploitation so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations. Once listed, sites may be kept under wise use but if needed can be moved to protected area status enabling technical assistance. Although of more limited scope, the Convention on Migratory Species (Bonn 1979) has generated a number of species specific accords each with its own secretariat. Although expensive to maintain it is a network of considerable expertise and is viewed by those involved with the CBD as an important ally when it comes to effective implantation strategies.

Joint work plans or cooperative memoranda of understanding are often used coordinate policy concerning specific issues and to harness synergies of expertise and capacity. The UNESCO World Heritage Convention (1972) enables habitats to be listed, access to related funding, and provides a useful model of how such facilitation can be developed.

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Biographical Sketch

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