

NEW APPROACHES TO THE CLASSIFICATION OF SPECIES INTO THE CITES APPENDICES

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The Convention on International Trade in Endangered Species (CITES) is a conservation tool of major importance. With over 120 nations now signatories (the Parties), it provides a global basis for the conservation of species in trade. Parties to the Convention ban or regulate international trade in those species listed on Appendices that are reviewed regularly at biennial meetings. Appendix I lists species in which international trade is almost completely prohibited and includes 'species threatened with extinction which may be affected by trade.' Appendix II lists species in which trade is permitted subject to a system of permits. It includes species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilisation incompatible with survival. Accordingly, the Parties have decided that there are both biological and trade reasons that determine whether species should be listed on one of the Appendices. A Resolution will be presented at the next meeting of the Parties that proposes new and more explicit criteria for listing. The development of these new criteria over the last few years has generated much debate and controversy. In this article we describe why a review of the listing criteria was necessary and some fundamental features of the new proposals.

The text of the Convention provides little guidance on how to decide which species to list on the Appendices. However, Resolutions were passed at the first Meeting of the Parties in 1976 in Bern, listing criteria for the inclusion of species on Appendix I and II, and for the transfer of species from Appendix II to Appendix I. In fact, the Bern criteria are not criteria at all. They give guidance on the kinds of information to be gathered on biological and trade status before a species is listed but do not help with interpreting the terms "threatened with extinction" or "affected by trade" that are in the treaty text, and upon which the decision over listing hangs. In addition, the Bern criteria have made it virtually impossible for certain species to be transferred from Appendix I to Appendix II. This is because these species were listed on Appendix I without even minimal population data to substantiate their status, yet their transfer is dependent upon evidence of improvement in status, and this cannot be demonstrated if their status was not documented or known at the time of their original listing.

As a result, recent Conferences of the Parties have been dominated by debates over the listing of particular high profile species. Perhaps because of the success of CITES as a conservation tool, there has been an increasing tendency to list species to promote them for some particular purpose, rather than because biological or trade data suggest that they are really in need of CITES protection. While we obviously wish the predicament of threatened species to be brought to the attention of a wide audience at any opportunity, the Appendices are devalued if they contain a vast array of species which are neither at risk from trade nor appear similar to traded species (and therefore need to be listed for look-alike

reasons). The effective operation of the Convention is prejudiced when there are large numbers of species listed on the Appendices that do not need to be there, because management and enforcement systems become overloaded and may ultimately jeopardise the protection of really needy species.

At the last Meeting of the Parties in Kyoto in 1992, a Resolution was passed recognising the inadequacy of the Bern criteria, and calling for a review of listing criteria. For several years IUCN had been involved in revising its own system for listing species as 'Endangered', 'Vulnerable', etc. on the Red Lists and in Red Data Books. The two processes have much in common, especially the need to define the term 'threatened with extinction' for practical purposes, and IUCN was contracted by the CITES Secretariat to develop a draft proposal for new criteria for the Convention.

The process for developing the criteria began seriously in the summer of 1992. A first draft was submitted in January 1993, but in the light of comments and evaluations, many alterations have since been made. The proposals have generated an enormous amount of interest and controversy, much of which stems from quite fundamental aspects.

Any system for categorising species according to their level of extinction risk is inevitably a caricature of reality. Species do not fall naturally into two groups of those that are threatened with extinction and those that are not. There is in fact a continuum of extinction risk, ranging from species that are very likely to go extinct in near future to those that are abundant and secure at least for the foreseeable future. The aim of categorising is to highlight those species at high risk over the short term. It follows that cut off points have to be decided upon that are appropriate for the effective operation of the Convention. For the system to be objective and transparent these cut off points need to be quantitative. IUCN recommended that the Parties needed to make a judgement about the appropriate levels based around the way in which they wanted the Convention to operate. However, this would follow from the development of a quantitative system for evaluating species.

The criteria for listing also need to be equally applicable to as wide a variety of taxa as possible. There is no doubt that without explicit criteria the large-bodied, well known and charismatic species are more likely to be considered for listing, regardless of any biological justification. The requirements of general applicability and of evaluation against

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some quantitative standard are demanding, but the difficulty of deriving a satisfactory system is further increased by the fact that for most species fundamental information on wild status and trade is, at best, sparse. Listing criteria need to make good use whatever information is available, yet to not discriminate against poorly known forms. For the efficient operation of the Convention the criteria need to be relatively simple and practical so that species can be moved onto and off the Appendices as their circumstances dictate.

The basis for the new criteria is that although the risk of extinction cannot be measured directly, it can be gauged from basic ecological information that is available for many natural populations. The measures in the proposed criteria include estimates of population size, area of distribution, observed or predicted rates of population decline or habitat loss and a variety of combinations of these. There are four different criteria and a species can qualify for Appendix I listing by falling inside the threshold values for any one of them. Different species experience threats in different ways, and to some extent this is related to their life form and hence to higher taxonomic groupings. In other words, we might expect to develop different criteria to evaluate extinction risk in mammals from those that were found to be useful for birds or for flowering plants. However, at these higher taxonomic levels there may be a great variety of life forms so that the correspondence is weak. It is therefore more precautionary to evaluate all species against all the different criteria and allow any species that meets at least one to qualify, rather than to develop higher taxon specific criteria. Thus, although it appears, perhaps rather absurdly, that all species are being judged by the same standards, this is not so. In practice different major taxa qualify by different criteria. For example, in the validation exercises many mammal and bird species qualified for Appendix I through having limited and declining populations, many plant species because of their limited distribution in precarious habitats, and some long lived timber species because of their rate of decline relative to their very long lifespan.

As explained above, it is necessary if the system is to be objective, transparent and of general applicability for the crite-

ria to be quantitative. However, this does not mean that rigorous survey data has to be available for the species to qualify. Notes accompanying the criteria state that estimation, inference and projection can all be used to reach a judgement about whether a species is likely to fall inside a threshold value for any of the criteria, and that in the case of genuine uncertainty the more precautionary decision should be made. The reasons for listing should be made clear so that they can be challenged and refined as more data becomes available or as the circumstances change. In practice it has proved to be much easier to apply the quantitative criteria than was anticipated, and for almost all the species tested using the new system it has been possible to make a decision.

Finally, there is the issue of where the cut-off points are chosen. As was discussed above the precise values chosen are in a sense arbitrary. Biological systems are complex and the factors influencing the level of trade that a species at a particular level of threat can sustain cannot be fully specified and measured. The Convention allows for trade to be effectively banned or to be closely managed and monitored. Precisely where on the continua of extinction risk and trade pressure the cutoff points for each of these management options should be placed is not obvious. It will come down to a value judgement decided to some extent by the particular philosophy of wildlife use that is being adopted. The initial IUCN report recommended cutoffs that many commentators felt were too exclusive (i.e. they restricted the number of species that would be included in Appendix I). Subsequently, the threshold values have been further relaxed by the Standing Committee, and if anything they will add more species to Appendix I.

Much of the concern about the new criteria results from the quantitative thresholds. Aside from the issue over where the levels are set, we see no way to develop an equitable and objective set of criteria that is not quantitative, though we recognise that not everyone agrees with this. Nevertheless, it is clear that the whole topic is one that is fundamental to the operation of the Convention, and that is considered examination is essential to clarify the role that CITES will continue to play for the benefits of wild species.

