Views and Opinions of Japan's Fisheries Industry

HIGHLIGHTS: *Are Tunas Endangered?*

The Essence of IUCN Red List Criteria and CITES Issues Examined

—Excerpts from "Are Tuna Endangered?"—

In the previous issue of Isaribi, we introduced the book "Are Tunas Endangered?" written by Dr. Yuji Uozumi of the National Research Institute of Far Seas Fisheries. In the book, Dr. Uozumi intends to convey to the reader, from the scientist's point of view, that the resources of tuna as they stand now are not in the least "endangered." At the same time he warns users of tuna resources to ensure sustainable use of tuna resources. The following is the first installment of our series of presentations from his book, centering on the criteria for inclusion in the endangered list.

A) **(See Table on the next page)** and the current number of individuals (Criterion D). If things stand as they are now, it would result in disregarding the conclusions drawn by using a large amount of information while it would become possible to make a judgment with only small amount of information.

Dr. Uozumi

(ii) Attaching importance only to the criteria would lead to misunderstanding the essence of the issues. To limit the information for assessment by the criteria usable with a limited amount of information is like putting the cart before the horse. The criteria show the definition of each category, and should be considered as a yardstick for judgment. The final judgment whether or not there is a risk of extinction should be made on the basis of all available information for the species in question, taking into consideration both conservation and biological aspects. It is unreasonable not to give priority to the results of the Criterion E. To uphold simple criteria as the basic principle and disregard other information would mean continuation of inappropriate listing of not only the tunas but also other species.

(1) Criteria are not applicable to all cases

In what follows I would like to consider what are the problems with the criteria.

(i) It should be pointed out that the Red List of the IUCN (The World Conservation Union) has been developed by researchers of taxonomy or breeding science, but not necessarily by experts in fishery science. It now seems that importance is given to the judgment on the basis of criteria developed in a way to enable decisions with very limited information. This can be known from the fact that the criteria using the probability of extinction estimated on the basis of a large amount of information are treated equally with those using only decrease rates (Criterion

---

(iii) I believe that it is far more important to collect views and information by experts of conservation biology, population ecology and biology for each species in question rather than simply formulating criteria. It is desirable to establish a system in which objective judgment is made while biases of certain countries or organizations would not affect scientific decisions. No matter how simple the criteria are and available to anybody, it is extremely dangerous that people with insufficient knowledge of biology or conservation biology, especially marine biology, solely make decisions.

(iv) The criteria cannot be complete because they are focused on the period when information is least available. It is evident that the more information is available, the more accurate judgment on the risk of extinction can be made. As highly accurate analysis is not possible when information is scarce, we tend to think that judgment can be made by non-experts, but it very often happens that a misleading judgment is made because of a scarcity of information. The less the amount of information, the more cautious examination is needed. For example, even when the only available information is catch volume, there are cases where this catch volume reflects the stock trend or where it does not reflect it at all. In order to

determine between the two possibilities, we may need various information such as the catch history and knowledge on the species characteristics. This information in most cases is not quantitative but fragmentary. Consequently, examination by experts who have much information and accumulated experience regarding various types of fisheries and related species is crucial. It is largely misleading to assume that anyone can make a judgment based on the simple criteria.

(2) True spirit and obligation of the Red List

What is the meaning of listing in the Red List certain species for which international organizations or individual governments are taking management measures? For example, management measures are taken for tuna and tuna-like species by international organizations. Yet the same species have been newly listed on the Red List. Further, the risk of extinction is judged with a far less amount of information than that used by international organizations for stock assessment. The species is listed in a very dogmatic manner that "it is the conclusion brought about by the criteria" while knowing that the "risk of extinction" is obviously overestimated. Such an approach will reduce the attention to the truly

Table: Criteria for IUCN Red List (summarized from the 2001 version)

	Critically Endangered	Endangered	Vunerable
A: Rapid decline	90%(80%) or over in 10 years or 3 generations	70%(50%) or over in 10 years or 3 generations	50%(20%) or over in 10 years or 3 generations
B: Narrow distribution area (with intermissions, continuous decline, and large fluctuations)	distribution area is less than 100km², or habitat is less than 10km²	distribution area is less than 5,000km², or habitat is less than 50km²	distribution area is less than 20,00km², or habitat is less than 10km²
C: Small group (with continuous decline)	less than 250 mature individuals; and 25% reduction occurs in 3 years or one generation	less than 2,500 mature individuals; and 20% reduction occurs in 5 years or 2 generations	less than 10,000 mature individuals; and 10% reduction occurs in 10 years or 3 generations
D: Especially small group	less than 50 mature individuals	less than 250 mature individuals	less than 1,000 mature individuals
E: Extinction probability	extinction probability of 50% or over in 10 years or 3 generations (provided within 100 years)	extinction probability of 20% or over in 20 years or 5 generations (provided within 100 years)	extinction probability of 10% or over in 100 years

The values in the parentheses are values in the 1994 version. For period the absolute number of years and generations are given, whichever longer in the two is used as period.

endangered species and only create problems. Such an approach should be critically reviewed.

No one thinks that pine or white cedar (hinoki cypress) in Japan are highly endangered simply because they fulfill the criteria. People know that those plants exist in abundance and there will not be any fear of extinction at least for the coming 100 years. Further, if claims are made that pine or white cedar are endangered based on those criteria, who will believe it? Some knowledge on tuna will help you come to the conclusion that tuna will not go extinct as in the case of pine or white cedar.

The Red List provides only a yardstick to know the priorities for implementing conservation measures. Therefore, there is a need to engage in argument always going back to the starting point. Any attempt to assess the risk of extinction using only imperfect and very incomplete criteria, and to list certain species in the Red List in a radical manner shows that the proponents do not understand at all the spirit of the Red List.

What is the meaning of listing on the Red List the tuna for which management measures have already been taken? What is being sought in doing so? We cannot find in listing tunas any serious intention to prevent the risk of extinction. What we need is the overall review of the significance of the Red List. We should recognize that the significant obligation of the Red List is to "contribute to the conservation of the species diversity."

(3) The limit of CITES

The objective of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is to regulate international trade in order to ensure the conservation of endangered species. In other words, it is to prevent the situation that necessitates transfer of a species from Appendix II to Appendix I.

However, in recent years, the interpretation of the CITES objective was expanded, and the view is arising that the objectives of CITES is to ensure "sustainable utilization." Moreover, along with this move, some make the claim to the extent that the word "endangered" should be deleted from the name of the Convention. That is to say, it is an attempt to expand the CITES objective from "preventing extinction of species" to "ensuring sustainable utilization."
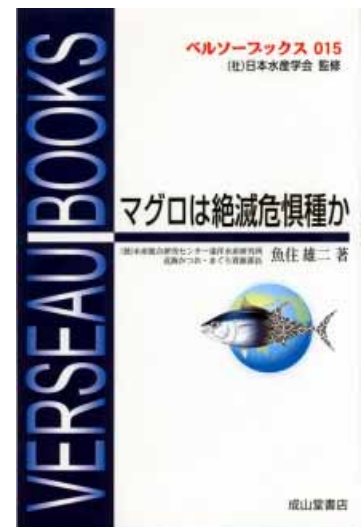
This seems to reflect the plausible thought that if sustainable utilization is realized, then conservation of the species can also be realized. However, we should stand here to determine the capability of CITES. Of course, it is quite another story if authority exceeding the control of international trade is granted to CITES, but the present competence of CITES is very simple, i.e. the regulation in international commercial trade.

"Are Tuna Endangered"
published by Seizando Shoten

Besides, many elements such as the restraint of environmental destruction and protection from the impact from other species should be considered. When we try to conserve a certain species, we may have to take very comprehensive protection measures. Nevertheless, the competence that CITES now has is only one of those measures. Of course, this competence works effectively depending on the time and case, but unless we use CITES always with this limitation in mind, we may have more disadvantages than benefits. Take, for example, the instance of resource management for tuna. Tuna resources are managed using various methods, such as the control of catch volumes taking into consideration the status of the population of each stock, the characteristics and the present situation of each fishery, and the establishment of size limits and closed areas. Also, full consideration is given to a balance among those management measures.

If CITES engages in exclusive regulation regarding international trade in fishery products, there arises a need to keep a close linkage with management organizations for those fishery resources. How to establish this system will become a vital issue. Regarding conclusion on the regulation, there should be a consensus between each management

organization and CITES.

If we look at the present situation, it does not seem there exists a close linkage between CITES and management organizations. Regarding reinforcement of the functions of CITES, we should start with how we can strengthen the linkage with such existing organizations. International tuna management organizations are already implementing trade controls very similar to those of CITES. What effect CITES can give to the implementation of such management measures is a question before us.

(4) Is absolute protection the best measure?

When we think of species conservation, we tend to enforce absolute protection so as to totally prohibit the use of the species. CITES Appendix I is a good example. It is needless to say that full protection of truly endangered species, such as blue whales, is necessary. However, if importance is attached only to full protection, there may often be confusion caused to already recovering species. In Japan, animals such as Ezo deer (a species of Japanese deer), the Japanese monkey, and the Japanese serow increased in numbers because of protection, and they, in turn, ate endangered plants and caused increased damage on agricultural products.

There is a very small portion of nature, at least on land, that can keep its balance without human intervention. When we think of such a reality, we know that protection should necessarily be accompanied by the concept of "management." If we disregard this aspect, we may cause damage by excessive protection.

The simplest and most certain way to adjust the number of over-increased animals is to harvest them. However, there are many people who entertain antipathy against the killing of Ezo deer and the Japanese serow. Some people have proposed the introduction of predators, such as wolves, into the environment instead of conducting hunting by man. This approach, however, could make management more uncertain because new complex elements are introduced into the ecosystem. It is a very dangerous concept because newly introduced animals can bring in diseases and other unexpected negative impacts.

> **...protection of the resources should necessarily be accompanied by the concept of "management." If we disregard this aspect, we may cause damage by excessive protection. We need the concept of wildlife management, in other words, resource management.**

We should discuss measures for more accurate management from an objective viewpoint, by excluding emotional factors.

In order to achieve this, we need to consider not only protection at the time protective measures are implemented, but also other measures to be taken when the species have recovered. In short, we may need the concept of "wildlife management," in other words "resource management" as it is called in fishery resource management.

A very realistic management approach taking uncertainties into account was introduced, after lengthy discussion for Ezo deer, a terrestrial species categorized as "endangered." In point of fact, the basis for this management approach was first devised for the management of whales. Unfortunately this approach was applied to Ezo deer before it was applied to whales.

(To be continued)

JFA To Hold 6th Int'l Food Show in July

The Japan Fisheries Association will hold the 6th Japan International Seafood & Technology Expo at the Tokyo International Exhibition Hall on July 21-23, 2004.

For details please contact: Secretariat at http//www.k-ide.com/seafood/eindex.html

---