



# OPRT

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Sankaido Bldg. (9th Floor)  
1-9-13 Akasaka, Minato-ku, Tokyo, Japan  
107-0052  
Tel: 03-3568-6388; Fax: 03-3568-6389  
Website: <http://www.oprt.or.jp>

FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

**Tuna expert's comment on CITES trade ban proposal**

## Why ban of trade in Atlantic bluefin tuna now?

### Questions about scientific basis of the CITES Appendix listing proposal

**Makoto Miyake, Ph.D**

**M**agement of living resources in the natural environment should, in its essence, be on scientific basis, meeting the characteristics of the resources. In judging whether the species is endangered or not, it is not a scientific approach to apply the criteria originally developed to a terrestrial rare species like giant panda, to a marine species like bluefin tuna. Giant panda, for example, have restricted habitat and low reproductive capability and are extremely vulnerable to natural enemies while one bluefin tuna lays nearly 100 million eggs per year and has the entire Atlantic as its habitat range.

Besides such scientific doubts on the validity of application of the current CITES criteria to a large mass of marine animals, further question is asked about the procedures of CITES in listing a species in its Appendices; as the judgment can be well influenced by diverse political and economic interests of member states. Is it appropriate to decide listing of Atlantic bluefin tuna in Appendix I by counts of votes of countries, including those having no coastlines and/or whose people have never seen tuna or tuna products in their lives?

#### **What is the current stock status?**

At the meeting of the SCRS of ICCAT (the Standing Committee on Research and Statistics of the International Commission for the Conservation of Atlantic Tunas) last year, the stock status of bluefin tuna was exhaustively assessed in two sessions, one normal and another extra session to specifically evaluate the bluefin resource in respect to the CITES criteria. Nearly 100 computer runs of future projection were made under various scenarios such as: the past catch largely exceeded the total allowable catch (TAC) or not; the high and low spawner-recruitment

relationships; the high, medium and low levels of future recruitments; various TAC ranging from 19,000 metric tons to zero; and the case where those TACs are complied with or not. The results of these projections varied very widely between optimism and pessimism.



Judging from the probability projections of most realistic scenarios, the Scientific Committee's conclusion was that the stock biomass has evidently decreased (overfished). It warned that, if the current level of fishing mortality continues, there is a high probability that the stock would decline further (overfishing continues). To stop overfishing situation and recover the stock level, the Scientific Committee recommended a closure of the Mediterranean spawning area during the spawning period, and adoption of a TAC of 15,000 tons or less. Subsequently, the Commission adopted its regulatory measures to respond to the Scientific Committee's recommendations and adopted even less TAC, i.e. 13,500 metric tons.

#### **What is the difference between regional fisheries management organizations and CITES?**

The objectives of CITES (Convention on

International Trade in Endangered Species of Wild Fauna and Flora) and RFMOs (Regional Fisheries Management Organizations) are very distinct.

In the case of ICCAT, its objective, set out in the Convention, is to utilize the resources of tuna and tuna-like species but maintain them at levels which will permit the maximum sustainable yield. Its basic concept is full utilization of resources. While doing so, ICCAT is required to take measures, including even an extreme regulation such as moratorium, to rebuild a population, if it is proven to be at a lower level than the MSY level.

On the other hand, the objective of CITES is to prohibit trade of endangered species, but it leaves a room to continue fishing activities for domestic market. Nonetheless, in principle, when massive catches are traded in international markets, like tunas, prohibition of trade would result in a total ban of fishing. Therefore, even in the case of the Atlantic bluefin tuna which could be harvested sustainably if catch is reduced (although it may not necessarily be at the maximum sustainable level), fishing would cease completely once it is included in CITES Appendix I.

The criteria for Appendix inclusion are applied mechanically, comprising the habitat range, the number of individuals and rate of reduction of biomass of the species from initial biomass (unfished stock size), i.e. the current biomass level falls below 10 to 20% of the initial biomass, depending on productivity. As already commented, such a mechanical application is not a scientific approach.

Bluefin tuna has been fished and recorded since the Greek and Roman periods. Aristotle left descriptions on his observations on tuna migratory routes and cooking methods. Its catch fluctuated drastically even since the 19th century, and its stock biomass fluctuations are considered demonstrating cycles: large-scale cycle of 120 years and small-scale cycle of about 20 years. It is extremely difficult to estimate the initial (unfished) stock biomass of such resources. Furthermore, it does not seem plausible to assert that Atlantic bluefin tuna is endangered while the current catch volume is within the scope of cyclical changes.

At any rate, there is no doubt that the key to the success in conservation of the Atlantic bluefin tuna lies in the compliance with ICCAT regulatory measures.

## View of European fishing shipowners' organizations

# "CITES listing proposal for Atlantic bluefin tuna is inappropriate", Européche President says

*In response to the question from OPRT, Javier Garat, President of Européche, stated that the listing of Atlantic bluefin tuna in Appendix I on CITES is inappropriate and reflects a lack of objective ground. Européche represents fishing shipowners of the 19 national organizations in 12 countries in Europe. Following is a summary of his comments.*

There are still discrepancies in the opinions regarding the actual state of the bluefin tuna stock which, therefore, requires an independent scientific assessment. In this respect, Garat underlines the important role of the ICCAT Scientific Committee which, in October 2009, decided that the three biological criteria to include the bluefin tuna in Annex I of CITES were not met<sup>1</sup>.

Moreover, the Scientific, Technical and Economic Committee on Fisheries of the EU (STECF) indicated in its report of 13 November, 2009, that the bluefin tuna stock is not threatened with extinction<sup>2</sup>.

Finally, the panel of experts convened by the FAO in December 2009 did not reach a consensus with regard to the need to include the bluefin tuna in Annex I.



### (Footnotes)

1. Existence of a reduced wild population; restricted distribution zone ; strong decline of the size of the population.

2. Given that the stock has the potential to rebuild if ICCAT Rec. 08-04 is implemented and rigorously enforced, STECF concludes that the Western Atlantic bluefin stock is not threatened with extinction”.

**Tuna science**

**The theory of 60-year cycle in fish population dynamics**

**120-year cycle also suggested for the Mediterranean bluefin tuna**

**Dr. Ziro Suzuki**  
Tuna Scientist

*What follows is a reprint of Dr. Suzuki's article, "The theory of 60-year cycle in fish population dynamics," which appeared in OPRT Newsletter International No.26.*

*We re-introduce the article with the intention to emphasize that fisheries are not the sole factor impacting the fish stock. Dr. Suzuki also indicated the precarious nature of the validity of CITES Appendix I listing of Atlantic bluefin tuna at COP15.*

Recently, Russian researchers made public that there is a cycle in the increase and decrease of fish population at an interval of nearly 60 years for all fish species, based on the examination of population dynamics of species such as sardines, salmon, cod and herring. It has been already known, through studies by Dr. Kawasaki, former professor of the Tohoku University, that there is a cycle in sardine population dynamics.

What is remarkable in the studies by the Russian researchers is that large-scale climate changes and the sardine population dynamics are compared over a span of several thousands of years, and that they showed that the trend of changes of the two factors have accurately synchronized.

In the absence of data from climatic observation and fisheries, how was it possible to know about massive climate changes and sardine population dynamics from several thousand years ago? As indicators for climate changes, the Russian researchers analyzed the ice layers in Greenland, which have accumulated over 1,500 years, and the growth rings of pines which grew in the Sierra Nevada mountain system in California.

As for sardine population dynamics, they analyzed the amount of scales deposited, without being dissolved, in the anaerobic layers off California over nearly 2,000 years. Based on

the results of the analysis, they clarified the correlation between the climate changes and sardine population dynamics.

The researchers pointed out that the 60-year cycle corresponds to the rise and decline periods of the earth's superficial layer temperatures, and the population of some groups of fish species increases during the rise period while other groups show a contrary trend. They went on to note that that natural changes impact to a greater extent to

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**OUTLINE OF OPRT**

Established in 2000, the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) represents major stakeholders in tuna fisheries, including tuna longline fishers in the world as well as traders, distributors and consumers in Japan.

OPRT members jointly and cooperatively work towards the development of responsible tuna fisheries in line with international and social responsibility. Since its inception, OPRT has been making steady progress towards the following goals.

- Elimination of IUU tuna fisheries
- Reduction of excess fishing capacity
- Reduction of incidental catch

**OPRT members and registered vessels (as of September 2009)**

Producers	Number of registered vessels
- Japan Tuna Fisheries Cooperative Association	271
- National Ocean Tuna Fishery Associations (Japan)	
- National Offshore Tuna Fisheries Association (Japan)	
- Taiwan Deep Sea Tuna long-line Boatowners And Exporters Association	369
- Korea Overseas Fisheries Association (Tuna Longline Fisheries Committee)	144
- OPRT Philippines Inc.	26
- Indonesia Tuna Association (ASTUIN)	17
- China Fisheries Association (Distant Water Fisheries Branch)	136
- FUNDATUNA (Ecuador)	7
- Deepsea Tuna Longline (Seychelles) Association	30
-Fiji Tuna Boat Owners' Association	21
Legitimized vessels (Vanuatu registered)	48
<b>Total registered vessels</b>	<b>1,069</b>

this phenomenon than fisheries.

Unfortunately, the Russian studies do not mention about tunas. But there are results of studies by French researchers who analyzed the set-net catch data of the Mediterranean bluefin tuna for over several hundreds of years, and reported that there is a 120-year cycle. Their paper also showed that there are correlations between the population increase phase and the water temperature declining period. By analyzing their research results more in detail, we may arrive at the 60-year cycle.

Meanwhile, the National Research Institute of Far Seas Fisheries in Japan has just started studies on the large-scale long-term changes in the catch (volume) of the Pacific bluefin tuna. If the 120-year cycle is plausible, it seems that the Mediterranean bluefin tuna is now in the increasing phase because the last increasing period started around 120 year ago. The decreasing trend of bluefin tuna population has now become a serious issue in the Mediterranean. However, it could be said that this long term cycle is partly playing the role in supporting the large catch of 30,000 - 50,000 tons of bluefin tuna in the past several decades in the Mediterranean.

I am interested in further researches about whether there exists a cycle for population dynamics of the Pacific bluefin tuna that is largely controlled by natural factors rather than fishing targeting bluefin tuna. It is my opinion that wild fish populations are changing always dynamically and such an assumption as equilibrium condition (stable condition of population without any changes) before fishing occurs is unrealistic and attempting to control any fish stocks without taking into account role of natural factors does not work.

It is also pointed out that there is an inherent risk in deciding on inclusion in Appendix solely based on the CITES Appendix listing criteria.

Dr. Yuji Uozumi, at the National Research Institute of Far Seas Fisheries of Japan, pointed out in his book "Are Tunas Endangered Species?" that "criteria, at their best, should be considered as a yardstick for making judgment, and should never be considered all-powerful."

Dr. Uozumi further stated: "The final judgment whether or not to list certain species in Appendix as 'endangered' should be made based on all the available information related to the history of fisheries and characteristics of the species. Often the available information is not quantitative and, in many cases, is fragmentary. Therefore, discussion is crucial among experts who have accumulated knowledge and expertise regarding various types of fisheries and related species." (translation from the original Japanese text)

The criteria for inclusion in Appendices are rules established by CITES itself. But there is no reason in sight for CITES to hasten to ban international trade in Atlantic bluefin tuna even at the cost of trampling down its own rules. ICCAT Scientific Committee, the most authoritative body on the state of Atlantic bluefin tuna populations, has not recommended terminating the fisheries, although it advised to curtail catch volume.

Further, ICCAT agreed to stronger management measures which will be implemented in the 2010 fishing season to accelerate rebuilding of the stock by various measures including the improved monitoring and control of the fisheries. CITES should respect this commitment of ICCAT in the first place because, if the compliance of the measures agreed is ensured, it would mean that the most effective conservation and management of Atlantic bluefin tuna will be ensured in the years to come.

It is needless to say that the prohibition of international trade in Atlantic bluefin tuna, bulk of which are internationally-traded commodity, would certainly lead to a de-facto prohibition of the fisheries. This will cause immeasurable repercussions not only to fishermen but also to many other stakeholders including processors and distributors, covering many countries concerned. We pose a serious question whether it is right for CITES to deprive these people of their means of livelihood in the absence of scientific and reasonable ground.

We should also take into account that, once the Atlantic bluefin tuna is listed in CITES Appendix I, it will become virtually impossible to amend the decision (i.e. either to remove or down list from Appendix I) almost perennially because fisheries that provide most important information for the validation of the stock recovery would be no longer in existence. Scientists would be unable to determine the stock status accurately without adequate information from fisheries.

The international community should bear in mind that it would lose one of the most important trade commodities and its fisheries almost forever if the proposal to list the Atlantic bluefin tuna in Appendix I is adopted at COP15.

## Editorial

### CITES listing proposal for Atlantic bluefin tuna - Is it the best choice?

**I**s the proposal to list Atlantic bluefin tuna in CITES Appendix I based on fair and valid ground?

Many scientists and researchers expressed the views that the proposal does not meet the Appendix I listing criteria established by CITES. Some of those views are introduced in this issue of OPRT Newsletter International. If CITES is a sound international organization, it should naturally listen to those opinions, and valid explanations should be given to the questions raised thereof. If the proposal is put to vote and decision is made while no reasonable responses to those questions are made, the credibility of CITES as an authoritative international organization would be seriously impaired.

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