



# OPRT

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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

OPRT Interview

### Reduction of excessive fishing capacity is an urgent task facing the world's tuna fisheries

An interview with Dr. Peter Makoto Miyake,  
Tuna Scientist

*Recently we have been reading an increasing number of news reports about the need to reduce the catch of tuna, such as the recent decision to slash the catch quota for bigeye tuna by 30% in the Western and Central Pacific. What has caused these decreases in tuna resources? Is it impossible to prevent further decreases in the future?*

*OPRT interviewed Dr. Peter Makoto Miyake, who served as Deputy Director General of the International Commission for the Conservation of Atlantic Tuna (ICCAT) and is now a Visiting Researcher at the National Research Institute of Far Seas Fisheries, Fisheries Research Agency, about the present state of tuna resources as seen from the perspective of a fisheries scientist.*

**Q. Which tuna stocks are considered to be in deteriorated conditions?**

**MIYAKE:** The tuna stocks facing the greatest danger are the Atlantic bluefin tuna and southern bluefin tuna. Other tuna stocks are at levels around the maximum sustainable yield (MSY): MSY level meaning that any further increase in catch will not be sustainable and will negatively impact the stock. Notably, in the case of Atlantic bluefin tuna, the stock size is already below the MSY level and the current fishing pressures on the stock are higher than the level corresponding to the MSY. If fishing continues at the present high level, Atlantic bluefin tuna will certainly continue decreasing at an accelerated pace.



**Q. What about bigeye tuna?**

**MIYAKE:** The stocks of bigeye tuna in the world are mostly around or slightly above the MSY levels depending on the area. But, in most cases for bigeye tuna, fishing pressures have greatly exceeded the levels for maintaining the stock at the current level. The major reason for this is that purse-seine fishing vessels harvest small-size bigeye tuna that gather near FADs (i.e. fish aggregating device which takes advantage of fish behavior to gather near floating objects) together with other tunas. Purse-seine fishing vessels generally target yellowfin and skipjack tunas. FADs fishing has become very popular since the 1990s, as it is a very effective fishing method for purse seiners. When they fish skipjack and yellowfin, small-size bigeye are caught at the same time, even though the seiners have no interest in catching them. Such an increased

catch of small bigeye (particularly in terms of number of fish rather than in weight) has caused an increasing impact on bigeye tuna resources as a whole. If purse-seine fishing vessels can avoid catching bigeye and only longline fishing vessels do so, a higher sustainable bigeye catch than the present catch level can be achieved, without any stock deterioration: avoiding small fish and catching only larger fish would increase the MSY level. This point is well-accepted by the scientific community. Currently, diverse techniques and equipment to avoid the bycatch of small-sized bigeye tunas during FAD fishing have been tested, but there has not been any decisively effective means identified.

***Q: It has been pointed out that ICCAT that manages Atlantic tuna resources has not been functioning adequately in recent years.***

**MIYAKE:** There has recently been much criticism of ICCAT's ability to manage tuna stocks. However, ICCAT's management measures for tuna species other than eastern bluefin have been implemented very successfully, and for many years, have maintained the stocks in a healthy condition. For example, the North Atlantic swordfish stock, which had been fished down below the MSY level in the late 1990s, has now recovered to a level above the MSY. This means ICCAT is, for most of the stocks, fulfilling its functions properly as an RFMO.

***Q: Why has management of Eastern Atlantic bluefin tuna failed up to now?***

**MIYAKE:** The reason for the failure in the management of Eastern Atlantic bluefin tuna is that fishing countries around the Mediterranean have not complied with ICCAT's regulatory measures.

Since the 1990s, ICCAT has established and implemented regulations, such as catch quotas and minimum size limits, in the Eastern Atlantic including the Mediterranean, but those rules have not been complied with. If member States had abided by the quota, the present situation would never have happened.

Basically, the most effective conservation measure is to close fishing in the spawning grounds during the spawning season to all fisheries. Scientists have been proposing this approach from the outset. However, because of the motives and intentions of countries concerned, scientists' recommendations to

establish closed seasons and areas have been ignored except by longliners, and instead, an approach to set catch quotas has been taken by the Commission. If the quota had been observed by all the fishing countries, the stock would not have been reduced as we have seen. Unfortunately, as I pointed out earlier, the fishing countries have not observed the quota, and this has resulted in further deterioration of the resources. The commencement of tuna farming in the Mediterranean may also have been a driving force. Tuna fattened in the region has a high market value mostly in Japan, making tuna farming a lucrative business. Because of this situation, tuna fishing vessels providing the supply of fish for farming have not scaled down their fishing operations.

***Q: We hear that, within the issues relating to fish stock management at RFMOs, there is an issue of conflicts of interest between developed fishing countries and developing nations which now aim to develop their fisheries.***

**MIYAKE:** If developing countries are serious in promoting fisheries by their nationals, countries/entities with advanced fishery have the responsibility to support such efforts positively. In many cases, however, new entries into tuna fishing by developing nations have been apparently prompted by countries/entities with advanced fishery taking advantage of the fishing rights given to developing coastal countries. In other words, this issue is not necessarily the confrontation between developed fishing nations and developing countries but rather it is interests within the advanced fishing nations/entities themselves and their overseas capital investment. Therefore, in large part, it is an issue pertaining to countries/entities with advanced fishery. Developing countries, for their part, benefit from this because they can earn license fees by letting contracts to other nations to fish in their EEZs. This is a vicious circle resulting from a situation in which tuna products have become internationally-traded commodities.

***Q: What are some effective means to maintain tuna resources and fishing at sustainable levels for many years to come?***

**MIYAKE:** Management of fishing capacity is the key issue. Fishing capacity, often expressed in number and size of fishing vessels, has become too large to

sustainably exploit the tuna stocks currently available. We need to curtail the current fishing capacity. Reduction of fishing capacity is crucial.

**Q: Can you tell us what fishing capacity is?**

**MIYAKE:** Fishing capacity does not mean the number of fishing vessels alone but also includes many socio-economic factors. For example, when fuel prices soar, fishing vessels tend to scale back their operations or refrain from going out to distant areas, so the fishing capacity naturally decreases. On the contrary, improvements in fishing technology can increase the fishing capacity; as technological progress is made from year to year, fishing capacity will increase, even when the number of fishing vessels remains unchanged. Viewed this way, the Working Group of the United Nations Food and Agriculture Organization (FAO) estimated the current global fishing capacity for tuna is at more than 130% of the proper level: meaning that there exists a capacity to catch 30% or more tuna than the present catch level if fishers choose to do so. Especially, as regards bluefin tuna in the Eastern Atlantic and the Mediterranean, the current fleet can catch at least twice as much as the present ICCAT quota for bluefin, if operated at a full capacity. Introduction of any stock management measures (e.g. quota) is difficult in this state of excessive fishing capacity. It would be much easier to adopt and implement regulations, if fishing capacity (including the number of fishing vessels) is less. Currently, more and more scientists and administrators are trying to bring overall tuna fishing capacity under control.

**Q: OPRT has agreed to limit the number of OPRT-registered fishing vessels among its members in order to ensure that the number of large-scale tuna longline fishing vessels in the world will not increase. OPRT has been implementing this agreement. What do you think of such efforts?**

**MIYAKE:** Not only myself, I know that the world tuna society highly values OPRT's efforts toward combating IUU and managing longline fishing vessels. I hope that efforts will be made to introduce similar measures to constrain fishing capacity of the world's purse-seine fishing fleets as well.

## Challenge against IUU fishing

### Taiwan set to eliminate IUU fishing - to strictly control fishing vessels under Taiwanese foreign investment

Taiwan promulgated the Presidential Decree on December 17, 2008, to control, effective from the same day, non-Taiwanese registered fishing vessels under investment and management by Taiwanese, in order to conserve marine fisheries resources and to ensure maintenance of the international fisheries management in order.

Under the law, a Taiwanese who carried out fishing activities by the non-Taiwanese registered fishing vessel under his investment and management, without prior approval of the Taiwanese authorities concerned, and of which vessel did not comply with the international fisheries management measures, shall be liable to imprisonment of up to 3 years, a fine of 10 million Taiwanese dollars (about US\$28 million) and forfeiture of the catch.

A Taiwanese, who dealt with fish laundering (as a case like selling or transshipping fish caught by a non-Taiwanese registered fishing vessel as the fish caught by a Taiwanese fishing vessel), shall be liable to imprisonment of more than 6 months up to 3 years and a fine of 30 million Taiwan dollars (about US\$85 million). Any Taiwanese, who has already engaged in the fishing by using a non-Taiwanese registered vessel under his investment and management before the announcement of the decree, is required to report to the authorities concerned the current status of the fisheries and the business history within 120 days from the date of announcement of the decree.

Loopholes for IUU fishing operators to escape the international management measures will be closed by the decree, if effectively implemented.

### FAO COFI recognizes the need to tackle excessive fishing capacity

The U.N. FAO's Committee on Fisheries (COFI) was held in Rome from March 2 - 6, with participants from about 110 nations,

international organizations and non-governmental organizations (NGOs).

The state of implementation of the Code of Conduct for Responsible Fisheries, the International Plans of Actions (fishing capacity, sea birds, sharks), measures against IUU fishing, etc. was reviewed, and the need to implement the plan on the management of fishing capacity was recognized. Further promotion of international efforts to eliminate IUU fishing was also agreed.

## Topics

### Japan to reduce 87 tuna longliners for recovery of tuna stocks

**T**he Fisheries Agency of Japan approved a plan to reduce Japan's longline fishing vessels. The plan is aimed to cope with the reduction of Atlantic bluefin catch limit adopted by ICCAT last November and the reduction of Pacific bigeye tuna catch adopted by the WCPFC last December. Eighty-seven tuna longline fishing vessels including 64 large-scale vessels will be reduced upon completion of the procedures required by the end of March.

Compensation will be paid to each owner of the vessel. The amount will vary depending on age or size of the vessel and other conditions. In case of a large-scale vessel, about 100 million yen will be compensated.

### The world's first full bluefin tuna culture achieved

**I**n its February 19 issue, the *Suisan Keizai*, a fisheries journal in Japan, carried an article based on an interview with Dr. Hidemi Kumai of the Fisheries Laboratory of Kinki University regarding the future prospect and expectation for tuna culture. Two years ago, Dr. Kumai and his team succeeded in full culture of bluefin tuna for the first time in the world and shipped 1,500 fully-cultured tuna juveniles. Following is an excerpt of the interview.

**QUESTION:** Expectation is high for the realization of tuna culture that would not cause decrease in natural resources.

**KUMAI:** In Japan's bluefin tuna culture, juvenile tunas are harvested in the wild and are raised in the

farming cages. It is one of our big goals to procure all the juveniles needed for culture without harvesting from the wild. When we attain this level, it would be possible to release the cultured tuna to add to the natural stock. However, as there are genetic problems involved in the fish release into the wild, I consider it important to proceed cautiously by solving those biological problems. It would take a considerable amount of time for that.

It took 32 years before we succeeded in full culture. During this period, there were 11 years in which bluefin tuna did not spawn. At present, spawning is taking place every year in our laboratories at Amami Island southwestern Japan, and elsewhere.

**QUESTION:** There has been an increasing concern about the state of juvenile bluefin tuna stock.

**KUMAI:** The technology to feed and raise the juvenile tunas harvested in the wild has already attained a level of near perfection. However, there is a strong likelihood that catch regulations on the natural bluefin tuna may be strengthened in the days ahead. While fishing technique is making progress, the amount of tuna that increases stays rather constant. It is therefore obvious that the resources will deplete if the fish are caught excessively. To avoid such consequences, a greater caution should be given to preventing over-fishing. In this regard, there is a concern such as purse-seining, which catches a large lot non-selectively with one cast of the net. Basically, angling methods, including longlining, is more suitable for conserving marine resources, not only tunas.

### Sashimi tuna supply to Japan further declines

**T**he Fisheries Agency of Japan recently reported that supply of sashimi tuna to Japan, the largest sashimi tuna market in the world, continuously declined in the past several years. In 2008, the annual supply was reduced to 341,000 tons (tentative estimate), reflecting poor catch and a drop of demand caused by the recent stagnant economy prevailed.

The supplies in the past years were 450,000 tons in 2005, 408,000 tons in 2006, and 381,000 tons in 2007. About 50% of the supply are imports from foreign countries. "Suspension of tuna longline fishing operations caused by the acute hike of fuel oil price last year may be a cause of shortage of supply as well", a senior tuna distributor commented.