



# OPRT

## NEWSLETTER INTERNATIONAL

## JULY 2014, No. 49

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

### OPRT Letter to WCPFC

## For the recovery of the Bigeye stock in WCPO, OPRT called for the steady and effective implementation of CMM 2013-01 of the WCPFC

On July 4, 2014, OPRT sent a letter to Professor Glenn Hurry, Executive Director of the Western and Central Pacific Fisheries Commission to call for the steady and effective implementation of CMM 2013-01 which was adopted at WCPFC10 last December as a multi-year program for 2014-2017, toward the recovery of the bigeye stock in the western and central Pacific Ocean (WCPO), in particular.

This letter was prepared based on the deliberation and the shared recognition of the OPRT members regarding the current status of tuna stocks in the region, activities of related fisheries and the provisions of the CMM mentioned-above at the OPRT membership meeting held on June 12, 2014, in Tokyo. Special attention was given to continued overfishing of the bigeye stock in the WCPO chiefly caused by increased catches of juveniles in FAD (Fish Aggregating Device) sets in the Purse seine fishery. Seven members representing the tuna longline industries in Japan, Taiwan, Korea, Philippines, Indonesia, the Seychelles and Vanuatu participated in the meeting. All OPRT members were provided with a copy of the letter upon transmission of the letter to the WCPFC.

1. The implementation of reductions in FAD sets by the purse seine fishery in 2015 and thereafter according to the provisions of this CMM has great importance to realize the recovery of the bigeye stock in the WCPO. To this end, related tasks provided for in this CMM to be completed by the end of this year's WCPFC Regular Session (WCPFC11) shall be done so on time and in a successful manner to ensure that the above-mentioned reductions will take effect.

The work to develop a scheme for the reduction of overcapacity, etc., shall be expedited so that an effective scheme may be established and brought into effect at an early stage.

2. The implementation of capacity control will be ensured through adequate monitoring for the following three types of fishing vessels: a) purse seine vessels flying their flag between 20N-20S that are larger than 24m



with freezing capacity; b) longline vessels with freezing capacity targeting bigeye tuna; and c) ice-chilled longline vessels targeting bigeye tuna and landing exclusively fresh fish.

3. When the Commission conducts its annual review to ensure that the various provisions in this CMM are having their intended effect(s), relevant elements should be examined including whether the duration of FAD closures, limits on FAD sets, and the levels of fishing effort to be made under the Vessel Day Scheme are commensurate with the relevant Fishing Mortalities to achieve the objectives of this CMM,.
4. With respect to small scale longliners, comprehensive monitoring shall be conducted and strengthened management measures should be considered, as necessary.

Each member is requested to make a request to its own government for expending best efforts to implement the provisions of the CMM concerned in a steady and effective manner, reflecting the views expressed in the letter of OPRT to the WCPFC.

\* Conservation and Management Measure (CMM) 2013-01  
[http://www.wcpfc.int/system/files/WCPFC%2010%20FINAL%20RECORD\\_1.pdf](http://www.wcpfc.int/system/files/WCPFC%2010%20FINAL%20RECORD_1.pdf)

WCPFC Website-->Meeting-->Regular Session of the Commission-->CPFC 10-->WCPFC 10 Summary Report(6.23MB) Attachment D

## OPRT Seminar

### Taiwan tuna industry leader says construction of energy-saving fishing vessels is advancing in Taiwan

President Wen-Jung Hsieh of the Taiwan Deep Sea Tuna Long-Line Boatowners and Exporters Association lectured on the present situation of tuna longline fishing in Taiwan at the first OPRT seminar in fiscal 2014 held in Tokyo on June 13. The topics he touched during the lecture included the issue of soaring fuel prices, development of energy-saving vessels, introduction of U.S.-type longline fishing system and the observer boarding scheme in the scale of 100-200 personnel.



After recalling two past oil crises in the 1970s, Hsieh talked about the industry's experience of the third crisis which occurred since 2011. He said that the high fuel prices have caused enormous hardship for the tuna industry in Taiwan, coupled with the weakening trend of the Japanese yen in recent years.

As a countermeasure against rising oil prices, Hsieh stressed the importance of constructing low-energy fishing vessels. "We have constructed 10 new vessels and achieved energy saving effects by reducing the fuel cost by as large as 50%, as we have anticipated," he said. "We can expect further saving effects depending on the vessel maneuvering skill of skippers."

With regard to workforce curtailment, he reported that down-sized fishing vessels using U.S.-type longline fishing system are now beginning to operate. "By using the U.S. system, we can cover the operation implemented by 24 crew members instead of 30 required when the Japanese system is used," he said. "We used short branch lines and improved line retrieval methods. The U.S. system comes cheaper than the Japanese one because the size of equipment to be installed onboard is smaller."

"Some fishing masters are not accustomed to using the U.S. system, but I am told that more or less the same amount of catch as with the Japanese system was achieved

for some tuna species," he added.

Regarding stock management, Hsieh said he believes that the observer boarding system in the scale of 100-200 personnel is the largest in the world. He further stressed that the Taiwanese tuna industry is cooperating in stock management on a broad basis, also coping voluntarily even with the measures yet unresolved at the regional fisheries management organizations (RFMOs). He also stated that at least two sets of vessel monitoring system (VMS) are installed on each vessel. The stock status in the Indian Ocean saw considerable recovery thanks to the no-fishing periods.

Hsieh further mentioned that farmed salmon in Chile is clamping down the upward move of prices of bigeye tuna. Development of overseas markets is not advancing smoothly because of the shortage in super low-temperature refrigeration facilities. He added that there is shortage in competent skippers and navigation officers and there are some who go on strike onboard the fishing vessels.

With respect to the issue of an increasing cases where small-type fresh longline boats are transformed into freezing vessels, Hsieh said, in an interview with the Suisan Keizai, a major fisheries daily in Japan: "It is a tough issue to resolve in the absence of governing laws. We are cooperating with the Taiwanese and Japanese governments as well as OPRT in carefully collecting the information on the state and activities of small-type fishing vessels with refrigeration capability aiming at encouraging them to join our association."

On measures to be taken vis-a-vis the soaring fuel prices, Hsieh noted that his association is trying to increase the number of energy-saving FRP vessels, but admitted that FRP vessels have some drawbacks such as difficulty in maintenance and weaker resistance to fire.

He said that construction of iron-made energy-saving vessels is now planned, although its effectiveness is still uncertain.

He stated the Taiwanese tuna industry is positively developing the sashimi tuna market in the mainland China. He also noted that purse-seine fishing vessels are causing adverse effects on tuna stocks in the Indian Ocean as well as in the western and central Pacific Ocean.

## Seabird conservation

### A short-tailed albatross chick is sighted on the Bonin Islands

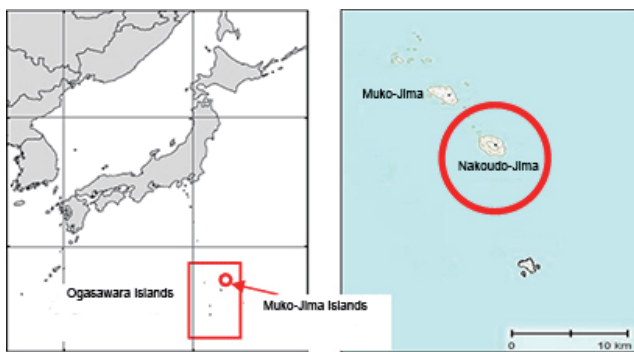
The Tokyo Metropolitan Government and the Institute of Boninology made an announcement that a chick deemed to be a short-tailed albatross (*Phoebastria albatrus*) was sighted in May this year on Nakoudo-Jima belonging to the Muko-Jima Islands that form part of the Bonin islands. Subsequently, it was reported in early July that this chick was highly likely a short-fin albatross according to the Hokkaido University Museum that had completed a DNA analysis using the collected feathers from the chick and its probable parents.

Breeding grounds have been found for this species on Tori-Shima of the Izu Islands and the Senkaku Islands in Japan and this is the first sighting of this species' chick on the Bonin Islands after World War II .

In the pre-World-War-II era, the Bonin Islands had provided major breeding grounds with tens of thousand of birds of this species but because of the heavy hunting for feathers, local extinction occurred for the population on the Bonin-Islands in the 1930's.

The removal of wild goats--which had originally been introduced into this island--conducted by the Tokyo Metropolitan Government was considered effective in the recovery of suitable environment for breeding on this island.

This is a good example to demonstrate that a holistic approach is necessary for rebuilding and maintaining sea bird populations.



Location of Nakoudo-Jima (Source: Website of the Tokyo Metropolitan Government's Environment Bureau)

## Dr. Miyake's Tuna Chat

### Small bigeye tuna associated with FAD

**Makoto Miyake**  
**Guest Researcher at the National Institute of Far Seas Fisheries**

In previous columns, I have taken up the subject of purse seine catch of very small tuna, particularly of bigeye associated with FAD. Some people claim that catching tuna spawners would have the largest negative impact on a tuna stock. Others claim that catching juvenile tuna would be worse as fish caught have no chance of spawning in their life time. The fact is that catching tuna has some negative impact on the stock, regardless of at what life stage it is taken and it matters little whether they are allowed to spawn or not, because in the case of tuna, there is little correlation between the abundance of spawners and that of the resulting recruitments.

On the one hand, limiting the catch of large fish (spawners) would reveal more of an instant effect on the apparent stock size, whilst on the other hand, limiting juvenile catches would show its effects in the longer term. The effect of catch limits should be evaluated in a balance with fishing

mortality, growth and natural mortality of fish at each life stage. Generally, catch quota are not set in terms of number of fish but in weight. Therefore, 1 ton of large fish represents only 10 to 20 fish, while 1 ton of small fish can represent 500 to 1000 fish. Even if the natural mortality occurring during the course of growing from small to large fish is taken into consideration, catching 500 small fish has more of a negative impact on the stock.



This is related to the analysis of yield per recruit. In other words, the question is: given a certain amount of recruitment, at what size (or age) should fish be caught in order to obtain the largest sustainable yield? For bigeye tuna, the curve showing yield that can be obtained at a certain size of fish increases rapidly from small fish until it reaches maximum level at the size of 60-70 kg (optimal size). Therefore, a catch of 1 ton at the optimal size would have the least impact on the stock, while 1 ton of catch of smaller fish would have a greater negative impact on the stock; and the smaller the fish are, the resulting impact is worse. After reaching the optimal size, the yield curve becomes almost flat but with a decreasing trend. Therefore, 1 ton of catch of fish larger than this optimal size would have somewhat more of an impact to the stock but the difference is much less than in the case of smaller fish.

People often combine all the immature fish in one category "immature/juvenile". However, this is totally wrong. As explained above, 1 ton of catch of fish of 2 kilos has an absolutely greater impact on the stock compared with 1 ton of fish of 40 kg, even though both are immature/juveniles. Purse seiners fishing on schooling fish catch relatively large immature/juveniles and sometimes even matured fish. However, purse seine set on fish associated with FAD catches almost exclusively very small fish. Therefore, those two types of purse seine operation should not be mixed up. In addition to this, species are generally not mixed in a free swimming school and the purse seine fishers can generally identify species in a school. Therefore, they can select species in their catches, avoiding bigeye if necessary. However, fish aggregated under FADs are mixed in species and size. Therefore, with current technology, fishers can not select species and/or size of fish in FAD fishing.

So far, the discussion has only considered the biological aspects of fish and fisheries. Even though we know that catching bigeye at 60-70 kg would provide us the maximum biological yield for a given recruitment, for socio-economic reasons, it is difficult to catch only fish at the optimal size. For example, if we prohibit catch of small fish, some fisheries of coastal developing states would have to be banned because only small-sized fish are available in their waters. In addition, the longline effort has to be increased by several folds to achieve that objective and thus the fish-harvesting cost would soar. Furthermore, tropical tuna fisheries are generally multi-specific, i.e. they target skipjack and yellowfin more than bigeye. Therefore, if regulation is based on bigeye, that regula-

tion might curtail the catches of other species which are adequately abundant.

Considering all these elements, stock management policy needs to be approached with a sense of balance and careful reflection of all factors. Scientists believe that any management measure for the bigeye stocks would not be successful unless the catch of very small fish associated with FAD is well regulated. Since this is the common concern in all the world oceans, can we find any appropriate measures to limit taking very small bigeye in FAD fishing?

## OPRT General Meeting

### OPRT chief says 2014 will be crucial year for conservation of tunas in WCPO

The 2014 General Meeting of the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) was held in Tokyo on June 13.

President Yoshio Tsutsumi, who completed his current term of office, was re-elected for the second term, together with Managing Director Daishiro Nagahata.

Further, a new organization in Maldives with eight fishing vessels was announced as an OPRT supporting member. It is reported that the organization is now in the process toward gaining full membership.

As of March 31, the number of tuna fishing vessels belonging to OPRT stood at 989. The current number of full members is 25.

At the outset of the meeting President Tsutsumi stated that stock management measures were adopted last year, centering, inter alia, on bigeye tuna, in the Western and Central Pacific Ocean, the largest tuna fishing ground where overfishing of this stock continues. He noted that a number of tasks shall be completed within this year to make these measures truly effective, saying that 2014 will be a crucial year for the success of the conservation of tuna resources in the region.

He added that OPRT will continue its activities, reflecting the views of its members, so that effective measures can be carried out at the earliest possible time.

Mr. Hisao Kato, Director of Fisheries Coordination Division of the Japanese Government's Fisheries Agency, addressed the meeting as the chief guest of honor. He

said that the agency highly values the efforts of OPRT in promoting tuna stock management. He expressed the hope that OPRT will continue its activities for the promotion of sashimi tuna consumption in Japan which is the largest tuna consuming nation in the world.

He noted that the bulk of tuna longline vessels registered to OPRT are large-scale vessels but small-scale longliners are on an increase lately. The Fisheries Agency will cooperate with OPRT so that longline fishermen, regardless of vessel sizes, will get united in implementing effective stock management measures, he said.

In fiscal 2014, OPRT will carry out activities including monitoring of the state of tuna resources and the trend of stock management at tuna-related regional fisheries management organizations (RFMOs), elimination and prevention of illegal, unreported and unregulated (IUU) fishing, and implementation of surveys on the distribution of imported tunas in Japan.

## Topic

### Children's day to learn about the Sea

The Children's Day to Promote Productive Seas" was held at Cape Taibusa in Chiba Prefecture, south of Tokyo, on May 17 and 18. This learning session—the 17th in its series—was sponsored by the Beneficiaries of the Sea, a non-profit organization of which OPRT is a member.

A total of 25 children accompanied by 14 parents experienced a variety of sessions regarding the sea, including collection and observation of marine organisms in the nearby tide pools, lectures on fisheries, participation in fisheries in the form of hauling of a beach seine, and filleting fish.



Saburo Hitomi, Manager of OPRT's Operation Division, lectured on tuna fisheries, mentioning that "when eating fish, please remember many people are involved in the process of bringing sashimi tuna to the table at your home, and eat fish with gratitude and care."

Sampling of "Shio Maguro (tuna seasoned with salt), prepared by Mr. Katsuhiko Ueda using tuna provided by OPRT, was very popular among children. The dish was eaten up enthusiastically in a very short period.

