



# OPRT

## NEWSLETTER INTERNATIONAL

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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

### Pacific tuna management

## Stock management of juvenile Pacific bluefin tuna gets started

Management measures to halve the catch of juvenile Pacific bluefin tuna less than 30kg started effective from January 1, 2015, with the aim of recovering the Pacific bluefin tuna stock. This is the first effort of this kind, through cooperation by all types of fisheries, including coastal fisheries. Monitoring of the stock will be reinforced in pace with the actual situation of local communities and types of local fisheries with a view to building up an effective management system.

Takashi Koya, Counselor at the Fisheries Agency's Resource Management Department, said, in a press conference on January 7: "The government hopes to spread the common awareness on the stock management to every corner of the fishing communities. All the stakeholders in the bluefin tuna fisheries, including all fishers, should work together to cope with this issue."

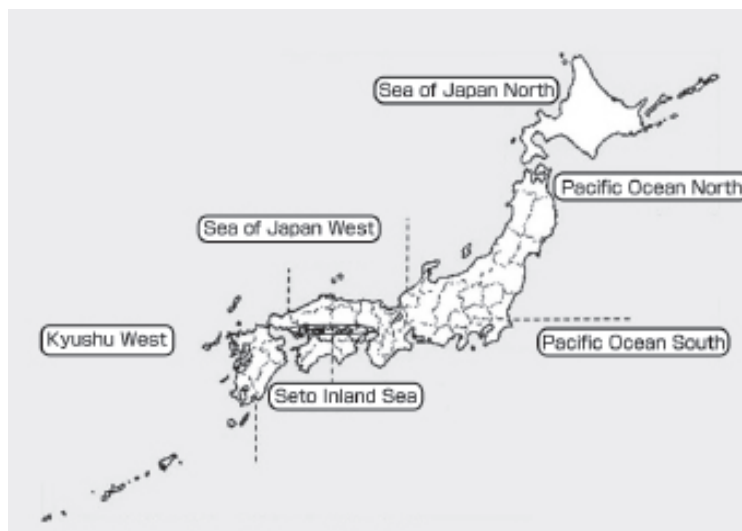
Catch quotas will be set for each of the newly established regional blocks, for the first time to coastal fisheries. Japan's coastal areas will be divided into six regional blocks. In the initial year, quotas will be allocated for a one- year- and- six -month period from January 2015 through June 2016 (except for the Sea of Japan North block for which a one- year- and- three- month period through March 2016 will apply). From the second year on, quotas will be allocated for 12 months from July through June the following year (except for the Sea of Japan North block, for which a 12 month period from April to March the following year will apply).

Measures shall cover not only all regional blocks concerned but also all types of related fisheries. All kinds of relevant fisheries will be subject to the management measures. In the present situation where active fishing (e.g., trolling/angling) and passive fishing (e.g., set net fisheries) coexist, management will be conducted taking into account the actual situation of each fishery. Especially, adequate management of set net fisheries should be ensured.

The accuracy of monitoring should be enhanced. Each prefectural government will compile catch data of the fisheries under its jurisdiction and report at least once a month to the Fisheries Agency. In order to collect data accurately, each fisher should be made aware of the necessity of reporting.

The catch data will be updated and publicized by the regional blocks and the prefectures on the Fisheries Agency's website. As the catch approaches the block-based upper limit, according to the stage in terms of the catch rate level to the limit, the following signals will be issued on a regional-block basis: advisory (when the rate has reached 70%), warning (80%), special warning (90%) and request for halting fishing operation on a voluntary basis (95%: considering the time necessary for determining the final catch figure).

Under the present circumstance where the spawning stock biomass has been at historically low levels, the recruitment of juvenile fish born in 2014 has also declined to a low level that has not been observed in recent years. Koya stated: "Through a series of serious dialogues to be made with stakeholders, a solid management system will be established. We will aim for the earliest possible stock recovery as the recruitment situation has been deteriorating."



## Jiro's Critical Eye

### Implication of success in Pacific bluefin spawning in land tanks under artificial control

Dr. Jiro Suzuki, Tuna Biologist

It was already reported that scientists of the Seikai National Fisheries Research Institute (SNFRI) located in Nagasaki had succeeded in artificially controlling spawning of Pacific bluefin tuna (PBFT) and obtaining almost all eggs spawned last summer, using newly-constructed rearing tanks located on part of the grounds of the SNFRI. As I had a chance to participate in a briefing session on this outcome held in Tokyo a couple of months ago, I would like to express my views on the implication of this success for future PBFT farming and fisheries.



Currently, the major process for PBFT farming starts with capturing wild juveniles of approximately 30cm in length and three months old, by small jig boats. PBFT juveniles are called yokowa in Japanese. Then, after a short period for feeding, yokowa are transferred to large pens where they are reared for about three years up to 50kg and then harvested for markets.

However, there are three weak points in this mode of farming.

Firstly, it relies on wild juvenile fish to start the farming process and their catch levels fluctuate greatly year by year. Secondly, even though the Kinki University succeeded in achieving the full life-cycle aquaculture of PBFT, spawning timing cannot be forecasted accurately and collecting fertilized eggs remains difficult in the sea. Therefore, work plans cannot be established in a foreseeable and stable manner. Thirdly, due to the deterioration of the PBFT stock, the harvest of juvenile fish has become subject to severe regulations including decreased catch levels of juveniles for farming.

For the purpose of resolving these problems, it was attempted for the very first time to control artificially the whole process of spawning of the PBFT in the newly constructed land tanks. This attempt resulted in significant success, by obtaining approximately 10 million fertilized eggs during the period from mid-May to late-August in 2014. At the beginning of this experiment, approximately 130 two-year-old fish (ca. 15kg in

weight) were transferred in May 2013 from the Amami region (another SNFRI tuna feeding station where PBFT are fed in pens, located in the Amami region of Kagoshima Prefecture) to Nagasaki, and were fed for a year in two large water tanks (each 20m in diameter and 6m in depth) within which both water temperature and daylight hours are artificially controlled. The collected fertilized eggs were sent back to the Amami station by aircraft before hatching, and now they are growing healthily at normal survival rates.

Such environmental factors as daily sea water temperatures and daylight hours in the tanks can be controlled, taking into account the data obtained from several examples of successful spawning taking place in pens. Environmental conditions within the tanks are controlled and recorded, and the behavior of fish is monitored around the clock with video cameras. Video monitoring is intensified when spawning events are considered to start in a short time. After confirming the commencement of spawning, fertilized eggs are collected in an effective manner.

In addition to the above-mentioned core procedures, a number of other relevant challenges, e.g., the transfer of fish from the farming pens to the land tanks via tender boats, had to be overcome. It is obvious that this success would not have been attained without expending tremendous efforts.

Through the process leading to this success, many interesting pieces of information relating to their spawning behavior have been obtained including the following: i) spawning in the tanks started at the water temperature of 21°C that is lower compared to the 24°C observed in the major spawning areas for PBFT in the Nansei Islands (near Okinawa) and ii) spawner mortality, which is considered to be incurred by fatigue due to continuous spawning activities, took place at a higher rate for males compared to that for females. It is anticipated that more important information will be provided as detailed analyses of the results of the experiments proceed.

The experiment is continued with the view to verifying the success attained last year and if proved successful, farming production of the PBFT will become more stable and able to secure planned production, leading to further improvement the full life-cycle aquaculture. The PBFT farming brings higher profits than that of yellowtail and red sea bream but the catch of wild PBFT juveniles for aquaculture is currently subject to restrictions under management regulations. Under these circumstances, this significant breakthrough leading to the provision of juvenile PBFT for aquaculture without being affected by fluctuating stock status of the PBFT, has enormous potential to give a new perspective to PBFT farming. Although there still remains

the need for increasing survival rates from the egg to harvesting stages, this success brings Japan a step ahead in leading bluefin tuna and southern bluefin tuna farming technologies in the world. I hope Japan will be a good example for well-balanced aquaculture which is sustainable and environmentally friendly, in the new stage of tuna farming to be brought about by artificially controlled spawning technology.

*Dr. Jiro SUZUKI is a leading tuna scientist who had worked for the National Research Institute of Far Sea Fisheries in Japan more than 30 years. He has participated in the scientific meetings of all tuna RFMOs. His critical eye to the issues of tuna resources management as a scientist is appreciated internationally as a vivid and constructive voice. Jiro's Critical Eye is now on OPRT's web (www.oprt.or.jp)*

## Topics

### An FAO Tuna Project Leader Visits OPRT

Mr. Gilles Hosch, Tuna Market & Trade Expert of FAO, visited OPRT on February 5, 2015. He is the team leader coordinating the project for traceability and Catch Documentation Scheme (CDS) systems for tuna fisheries. FAO has been taking the lead in this one-year activity, starting in July, 2014. This project includes investigation and analyses of tuna supply chains and existing tuna RFMO CDS systems.

Mr. Hosch's visit to Japan was conducted as a part of the investigation.

Mr. Nagahata, Managing Director of OPRT, welcomed Mr. Hosch, and after outlining the purpose, membership, history and current activities of OPRT, elaborated on supply chains for Bluefin tuna and Southern bluefin tuna in Japan.

### Misaki Tuna Ticket attracting growing tourist attention

Popularity is now rising for "Misaki Tuna Ticket," a one-day package tour to Misaki in Miura City, a tuna town in Kanagawa Prefecture.

Keikyu Corporation is one of Japan's major private railways, linking the Tokyo Metropolitan area with the tip of the Miura Peninsula in Kanagawa Prefecture. An average of 1.18 million people uses this railway daily. The northeastern end of the railway is Shinagawa in Tokyo and it is also connected to Haneda (Tokyo) International Airport.

The southwestern end is the Misaki-Guchi Terminal

in Miura City, Kanagawa Prefecture, that is the closest railway station to Misaki, where tunas are landed and there is a concentration of fishing companies, distributors and eating establishments, forming a community of a unique tuna eating culture.

"Misaki Tuna Ticket," featuring Misaki in Miura City, was placed on sale in fiscal 2012, and currently offers the following set of special services:

- (i) a discounted train/bus ticket with which a passenger can travel from the densely populated areas including the Tokyo Metropolis and Yokohama City, to the Misaki-Guchi Terminal, and get on and off freely within the Miura/Misaki areas;
- (ii) a meal voucher enabling customers to choose one tuna dish menu item from among the 25 eateries;
- and (iii) a ticket to use at one of the 8 major leisure facilities and services including an aquarium, a warm bath facility and rental bicycles.

The ticket is becoming increasingly popular because it

- (i) offers the advantage of using the three services at a cheaper price than if bought separately;
- (ii) makes it easier to use specialized tuna restaurants which customers, in particular younger people, otherwise hesitate to visit, and
- (iii) makes available special tuna dishes that can be enjoyed only with the meal voucher.

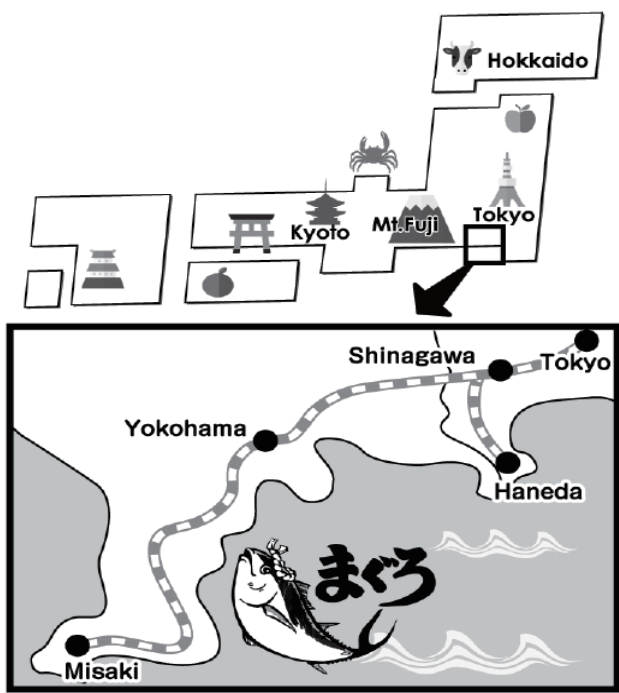
Some users seem to be enjoying the services, changing the combination of restaurants and menus as well as leisure facilities used each visit. It is a day trip from the Tokyo Metropolitan area to enjoy the fishing ports and delicious tuna dishes as well as a hot spa with a view of Mount Fuji. Its popularity is rising as a package ticket with which one can amply enjoy the mood of traveling.

About 20,000 tickets were sold in fiscal 2012, with



Misaki Tuna Ticket





tickets in the days ahead so that more users will visit Misaki and Miura to enjoy tunas.

## Highest-price bluefin tuna fetches JPY4.51 million at the year's first Tsukiji auction

--135 bluefins from Tsugaru Strait offered for bidding--

A total of 135 bluefin tuna from the Tsugaru Strait, which is located between Hokkaido and Aomori Prefecture, northernmost of Japan's main island Honshu, were offered for bidding at this year's first auction at the Tsukiji Fish Market in Tokyo



the number rising to above 60,000 in fiscal 2013 and more than 120,000 in fiscal 2014 (it is estimated to be doubled from the previous fiscal year). The number of eating establishments serving meals for the vouchers rose from 20 to 25 during the three-year period.

At present, in the Misaki/Miura area on Saturdays and Sundays, many people can be seen bringing with them the leaflets obtained when purchasing the Misaki Tuna Ticket at Keikyu railway stations. A Keikyu Group spokesperson says that the company continues its endeavors to provide higher-quality

on January 5, 2015. This number represented more than four times the amount offered the year before. Some wholesalers said with astonishment that this was the largest number at the first auction as far as they can remember. Others noted this was a volume with

no precedents in recent years. A 180-kg tuna landed at Oma, Aomori Prefecture, fetched the highest price for this year at JPY4.51 million, which corresponded to JPY25,000 per kg.

This tuna was successfully bid by Kiyomura, a company that runs the major sushi restaurant chain "Sushi Zanmai." Kiyomura was the top winner in the auction for the fourth consecutive year. In 2013, the price had soared to an astounding all-time high of about JPY150 million, but the bidding race calmed down

in 2014. The per-kilo price this year further declined from JPY32,000 last year—a level before the period when the buying competition heated up.

### Schedule for Annual Commission Meetings of Tuna-related RFMOs -2015- (as of March 24, 2015)

Date	RFMO	Venue
April 27(Mon) – May 1 (Fri)	IOTC: 19th Session of the Indian Ocean Tuna Commission (S19)	Busan, Rep. of Korea
June 29 (Mon) – July 3(Fri)	IATTC: 89 <sup>th</sup> Meeting of the IATTC	Guayaquil, Ecuador
Oct. 12 (Mon) – 15(Thu)	CCSBT: 22 <sup>nd</sup> Annual Meeting of the Commission, incorporating the Extended Commission	Yeosu, Rep. of Korea
Nov. 10(Tue) – 17( Tue )	ICCAT: 24th Regular Meeting of the Commission	Malta
Dec. 3(Thu) – 8(Tue)	WCPFC: 12th Regular Session of the Commission	Bali, Indonesia

Source: Websites of respective Commissions  
Note: Date and/or Venue might be subject to change.)  
(as of March 24, 2015)