



OPRT

NEWSLETTER INTERNATIONAL SEPT. 2014, No. 50

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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

WCPO bigeye tuna

WCPO bigeye tuna is overfished; WCPFC Scientific Committee determines the stock is in Red Zone

The Scientific Committee of the Western and Central Pacific Fisheries Commission (WCPFC) came up with a stock assessment that the bigeye tuna in the Western and Central Pacific Ocean (WCPO) is in the state of overfished.

For the first time in history, the stock has plunged into the Red Zone – a category that the stock chart shows to be most dangerous and calls for emergency actions for recovery of the stock. The WCPFC has recommended a series of management measures to date, but overfishing has not been halted. It is necessary to reinforce the current conservation and management measures at the WCPFC annual meeting to be held in December.

The 10th WCPFC Scientific Committee meeting was held in Majuro, Marshall Islands from August 6 to 14, 2014 (SC10) and conducted new stock assessments for bigeye, yellowfin and skipjack stocks in the Western and Central Pacific Ocean (WCPO). According to the previous assessment conducted in 2011, overfishing was occurring for the bigeye stock but the stock was not overfished. However, SC10 indicated that for the stock $F_{\text{current}}/F_{\text{MSY}}=1.57$ (considerable overfishing), and noted that the spawning biomass breached the biomass LRP (Limit Reference Point: $0.2SB_{F=0}$) in 2012 and that the stock was overfished.

It advised that rebuilding spawning biomass to the above the biomass LRP will require a reduction in fishing mortality and recommended at least 36% reduction in fishing mortality from the average levels for 2008-2011. This recommended level of reduction in fishing mortality could also be stated as a minimum 33% reduction from the 2004 level or a minimum 26% reduction from the average 2001-2004 level.

WCPFC has adopted a series of conservation and management measures (CMMs) for the on-going deterioration of bigeye stock and in recent years measures including a four month prohibition of purse seine setting on FADs (Fish Aggregating Devices) have been implemented with the view to reducing the catch of juvenile bigeye tuna.

Despite such time closure for FAD sets, the number of purse seine vessels has continued increasing in the WCPO and this has led to the continuous increase in the fishing mortality for this stock and the resultant deterioration of the stock.

At the Regular Session of WCPFC held in last December adopted a new CMM -- a multi-year management program for 2014-2017-- including a five

month prohibition of FAD setting, gradual reduction in total number of FAD sets, setting on FAD will be banned in 2017 on the high seas with limited exemption.

With the advices and recommendations from SC10, an official of Fisheries Agency of Japanese Government said "It became obvious that the current CCM is not effective enough to realize the rebuilding of the bigeye stock in the WCPO and strengthening of measures deems necessary.

For yellowfin, SC10's observation for the stock status is

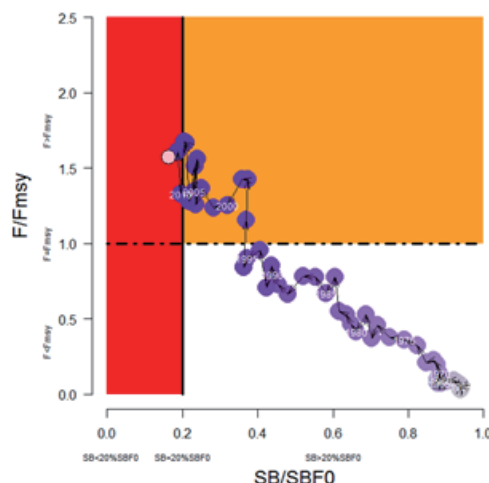


Figure: Temporal trend for the base case model in stock status relative to $SB_{F=0}$ (x-axis) and F_{MSY} (y-axis). The red zone represents spawning potential levels lower than the agreed LRP which is marked with the solid black line ($0.2SB_{F=0}$). The orange region is for fishing mortality greater than F_{MSY} ($F=F_{MSY}$; marked with the black dashed line). The pink circle is $SB_{2012}/SB_{F=0}$ (where $SB_{F=0}$ was the average over the period 2002-2011).

highly likely that stock is not experiencing overfishing and is not in an overfished state. However, SC10 recommended that the catch of WCPO yellowfin should not be increased from 2012 levels which exceeded MSY.

For skipjack, the assessment shows that the stock is currently only moderately exploited and fishing mortality levels are sustainable. But the continuing increase in fishing mortality and decline in the stock size are recognized. SC10 advised there are concerns that high catches in the equatorial region could result in range contractions of the stocks, thus reducing availability to latitude fisheries.

SC10 recommended the Commission take action to avoid further increases in fishing mortality and keep the skipjack stock around the current levels, with tighter purse-seine control rules.

SC10 further stated that additional purse-seine effort will yield only modest gains in long-term skipjack catches and may result in a corresponding increase in fishing mortality for bigeye and yellowfin tunas, and the management of total effort in the WCPO should recognize this.

EDITORIAL

For WCPO bigeye recovery, stock recovery measures shall be developed and adopted at WCPFC11, and must be fair among fisheries involved

Last December the regular session of WCPFC (WCPFC10) adopted a conservation and management measure CMM 2013-01, or a multi-year management program for tropical tunas including bigeye in the Western Central Pacific Ocean (WCPO).

In this connection, recently, the Scientific Committee of WCPFC after an interval of three years conducted new full stock assessments for bigeye, yellowfin and skipjack in the WCPO at its tenth Regular Session (SC10) held in Majuro, Marshall Islands from August 6 to 14, 2014.

In its Summary Report, the bigeye stock in the WCPO has been determined to be overfished. The overfishing with increased juvenile catches through FAD (Fish Aggregating Device) sets by purse seine fisheries has continued for many years and consequently longline fisheries including the OPRT members' longline fleets have suffered from continuously declining CPUEs in the WCPO. We, therefore, repeatedly urged that an effective CCM be developed, adopted and implemented at the earliest possible stage with the view toward rectifying such situation. After the assessment from SC10 became available to us indicating that the stock is overfished, our concern has been deepened for the future sustainability of this stock, and we have been deeply disappointed at the fact that the WCPFC framework has not been successful in implementing effective conservation and management measures in a timely manner.

In this regard, it is deemed indispensable that substantive reviews be conducted in order to ensure, in particular, the steady recovery of the bigeye stock in the WCPO, and, as necessary, strengthened provisions be developed and adopted at WCPFC11, based on the objectives for the individual tuna stocks provided for in CMM2013-01 and the recommendations from SC10. We strongly request that all CCMs shall work together in this task in a positive manner. While purse seine fisheries, as a whole, have increased fishing mortalities on the bigeye stock through their operations associated with FADs, longline fisheries from distant water nations have complied with the provisions of previous CMMs, including catch limits set for respective longline fleets, by making their best efforts to reduce bigeye catches.

In future discussions on this issue, arguments might be raised that the burden should chiefly be borne by the longline fisheries because they catch adult fish and because the Commission is required to take measures to recover the spawning biomass (SB). But such arguments would be totally wrong. Purse seine fisheries have caught a very large number of juvenile bigeye and it has been recognized by the SC that large catches of juvenile bigeye by purse seiners affect adversely the levels of SB for this stock. Measures to be developed and adopted at WCPFC11 to improve CCM 2013-01 must be fair among the fisheries involved based on the impacts on the stock by the respective fisheries and the history of respective catches.

Finally, towards WCPFC11 there is not much time left. We hope that conservation and management measures related to tropical tunas in the WCPO in particular bigeye will be reviewed, developed and implemented in an effective and fair manner, and in a timely fashion.

Skipjack migration routes

Three major routes were identified for the migration of skipjack towards waters off Japan from the recent electronic tagging surveys

Skipjack is one of the most popular fish to Japanese people over many centuries. In the Edo-era (A.D.1603-1868), skipjack was believed as an auspicious food which brings good luck, and in particular, those harvested in very early part of the fishing season each year (usually in early summer at that time and area) were highly appreciated in the food culture of the Edo city area (currently Tokyo metropolitan area).

Although Japanese people say that skipjack migrate northward along with the Kuroshio, i.e. the Japan Current to waters off Japan, patterns of their migration to Japan have not been explained with scientific evidences.

With regard to this, National Research Institute of Far Seas Fisheries has conducted large-scale tagging surveys on skipjack using electronic tags since 2011 in order to

identify their migration routes to Japanese waters and obtain other related information. The following information on characteristics of their northward migrations -horizontal movements- toward waters off Japan has been obtained based on the results from these surveys, where skipjack of approximately 40 cm in fork length were selected to tag and release, considering the size of the fish harvested by commercial fisheries in waters off Japan in early spring.

Out of 760 individuals of released skipjack to which electronic tags were attached in the surveys conducted during 2011 to 2013, 41 have been re-captured (re-capture rate is 5.4%). Based on the information of geographical positions where those fish were re-captured, we have concluded that, broadly speaking, there are three major routes for northward migration to waters off Japan as follows (see the figure): a) one along with the Kuroshio in the East China Sea; b) one along the Kyushu-Palau ridge; and c) one along the Izu Islands and the Bonin Islands. In addition, we have found that skipjack that were released off Yonaguni-Jima stayed for a certain period of time in the Tokara Islands area and that few individuals migrated from the Tokara Islands area to waters off Kochi. The contours of surface temperature of 20 °C or less occurring in waters south of Japan from winter to spring are considered as one of the major factors that make skipjack on the northward migration to waters off Japan to take a detour.

The implementation of large-scale tagging surveys using electronic tags illustrates major routes of the northward migration of skipjack, which were not explained with scientific evidences prior to these surveys. Differing from the above-mentioned saying, skipjack do not necessarily migrate to waters off Japan along with the Kuroshio. The fact that skipjack migrating from the south are fished on the axis of the Kuroshio and its vicinity in waters off Japan is presumed to have brought the impression that lead to the saying mentioned above in Japan: skipjack migrate along with Kuroshio

On the other hand, better understanding of the factors

related to such migration would lead to clearer grasp of the migration mechanism for skipjack, and we hope that such progress will enable us to make better forecasts concerning the fishing ground formation for skipjack in

Pacific bluefin tuna

Further reduction in fishing mortality of juvenile Pacific bluefin tuna is needed; More rigorous measures to be adopted in line with ISC's discussion

The meeting of the Northern Committee of the Western and Central Pacific Fisheries Commission (WCPFC) was held in Fukuoka Sept.1-4.

At the meeting, delegates discussed Japan's proposal to slash the catch of juvenile Pacific bluefin tuna by 50% from the annual average of 2002-2004, based on the results of stock assessment by the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC). The committee agreed on this proposal as follows, with the recommendation to be submitted for adoption at the WCPFC annual meeting next December.

(1) the initial goal for the present is set to have the spawning biomass now standing at around the historical low level of about 25,000 tons recover to the historical median level (about 43,000 tons) during the decade from 2015;

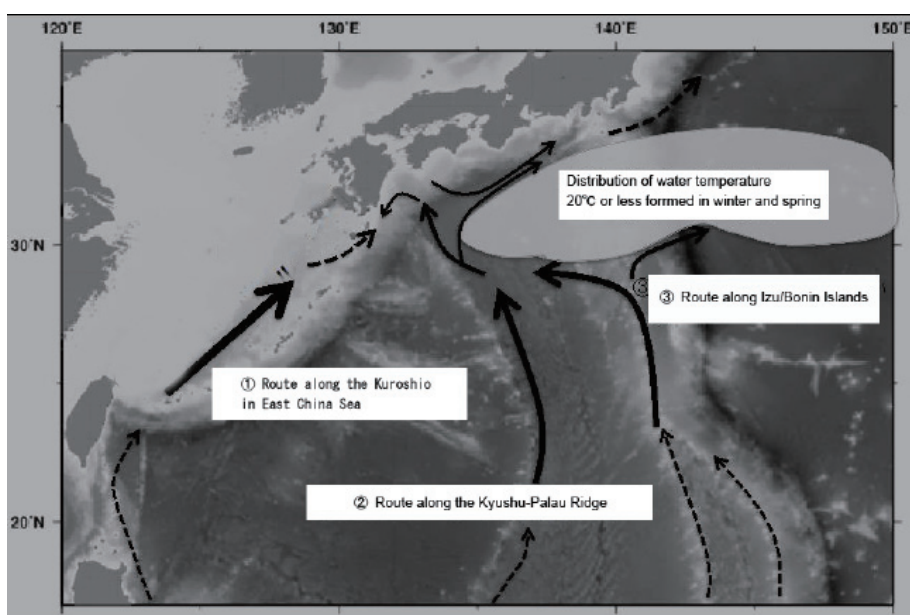
(2) to reduce the catch of juvenile fish less than 30 kg by 50% from the 2002-2004 annual average(*) (to reduce the overall WCPFC catch from 9,450 tons to 4,725 tons; Japan's catch will be reduced from 8,015 tons to 4,007 tons);

(3) all practicable measures will be implemented to not to have the catch of large-size fish (30 kg or larger) exceed the 2002-2004 average (6,591 tons for the entire WCPFC and 4,882 tons for Japan);

(4) all the member countries are requested to cooperate in effective implementation of the conservation and management measures, including juvenile catch reduction; and

(5) to develop at the Northern Committee meetings in 2015 and 2016 a long-term stock management policy after the recovery of the population.

(* The major measure adopted last year was to curtail catch of juvenile bluefin tuna by 15% from the 2002-2004 annual average in 2014.)



IATTC

No Agreement reached on the reduction of juvenile Pacific bluefin catch at IATTC meeting; Japan, Mexico and USA will continue consultation

At the 87th Meeting of the IATTC (Inter-American Tropical Tuna Commission) held in Lima, Peru from July 14 to 18, 2014, members discussed conservation and management measures for tunas in the eastern Pacific.

No agreement was reached for Pacific bluefin because Mexico opposed to the proposal to reduce the catch quotas, which had been drafted based on the stock assessment conducted by the International Scientific Committee for Tuna and Tuna-like species in the North Pacific Ocean (ISC). Japan, Mexico and the USA agreed to continue consultations with the view to achieving a conclusion by around October this year.

Currently, while no Japanese fleets catch Pacific bluefin in the eastern Pacific, Mexico which historically catches the second largest amount of Pacific bluefin following Japan in the world has made annual catches at levels of around 5,000mt. Mexico has also been increasing catch of Pacific bluefin recently and made the largest catch of 6,300mt in 2012 among countries including Japan.

Japan made a proposal based on the recommendations from the ISC. It has been developing measures to reduce the catch of juvenile Pacific bluefin (less than 30kg) by 50% from the annual average in 2002-2004 domestically and the same time it has established a policy to request other countries catching Pacific bluefin to do the same. This IATTC meeting is the first occasion for Japan to deal with Pacific bluefin issue with this policy.

At the meeting, Japan proposed the following measures to be applied to Mexico: i) to reduce the juvenile Pacific bluefin catch by 50% (3,770mt to 1,885mt), and ii) to maintain the catch of larger-size Pacific bluefin at the current level (1,549mt). But, no agreement was attained at this meeting.

In this connection, it was agreed that US sports fisheries which have been exempted from controls with catch quota under IATTC, would be subject to such controls from the next year, in response to the Japanese proposal that advocates no exemptions in the management measures to be adopted.

In this situation, Japan, Mexico and the USA decided to continue consultations.

Japan stated that it would make utmost efforts to attain the adoption of relevant measures based on the recommendations from the ISC at the forthcoming meeting of the Northern Committee of WCPFC scheduled in September and it would commence consideration domestically on what kind of measures can be taken against the Pacific bluefin products that are caught in the

manner against those recommendations.

OPRT Topic

Tuna fishing vessel cruise in Kesennuma with Actor Ken Watanabe and Kaho Minami

Usufuku Honten (President: Mr. Sotaro Usui), a company operating deep-sea tuna fishing based in Kesennuma, Miyagi Prefecture, held in April a hands-on cruise to experience boarding of a tuna fishing vessel. No.18 Shofuku-Maru, a newly built pelagic tuna longline fishing vessel was used in this event. The company obtained a temporary permission for operating the vessel for this event. A total of 240 people – the full number of participants the company set to accommodate – applied before the end of the reservation period.

There are many pelagic tuna longline fishing vessels registered in Kesennuma, and many citizens see the vessels moored to the wharves. But there have been very few who actually have had actual experience of stepping inside the vessels. To be inside the fishing vessel has been set aside only for the vessel crew. President Usui planned this event in the hope that citizens become supporters of fisheries through this occasion. Organizers made every effort to realize this unprecedented event. The world-famous actor Ken Watanabe and his wife Kaho Minami, who have supported the restoration of Kesennuma from the great earthquake and tsunami in 2011, took part in the event. A talk show of Watanabe with Shofuku-Maru's fishing master Wataru Maekawa was presented to the visitors.

Participants in the hour-long cruise--8 cruises during two days--had a new experience of boarding pelagic tuna longline vessel and renewed their awareness that fish should be eaten with care and gratitude. Many children who joined the event, explored the inside of the vessel with excitement. One participant commented: "I found the living environment of the ship more comfortable than I had anticipated. I may encourage my son to become a crew member in the future."



Talk show with Ken Watanabe (right)

