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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

Stereoscopic video camera

ICCAT strengthens mandatory use of stereoscopic video cameras for tuna farming

Jiro Suzuki, Tuna Biologist

Introduction

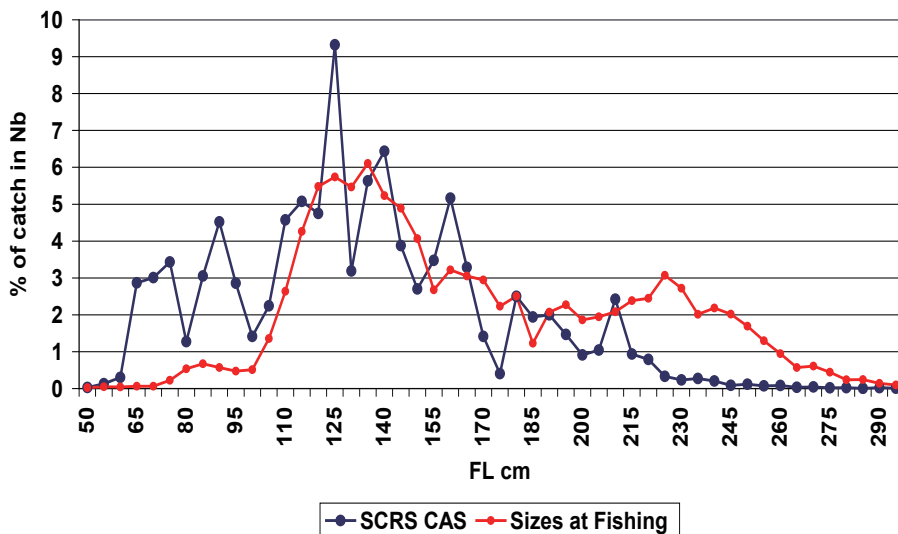
Stock recovery of the eastern Atlantic bluefin tuna has been confirmed by the International Commission for the Conservation of Atlantic Tunas (ICCAT) scientific committee, the Standing Committee on Research and Statistics (SCRS), resulting in a flood of bluefin throughout all the adjacent coastal and offshore areas of the Mediterranean Sea. The catch limit allocated to traps was soon filled and some 32,000 giant fish (roughly 7,000 tons) had to be released from Moroccan traps only. Aerial surveys witness a significant increase in juvenile bluefin and Japanese longliners have been enjoying good catches of medium and giant bluefin in the offshore Eastern Atlantic. On the other hand, the SCRS reports that from a precautionary view point it is not yet in favor of advising for an increase in the TAC since there remain several uncertainties in the stock

assessments. Deviations between the fishing indicators and the stock assessment results have increased year by year in recent years and distrust of the SCRS stock assessments by the managers and fishermen has become more acute. There are several sources of the deviations but I would like to take one of the major factors, i.e., gross inaccuracy in the reported catch and the size of bluefin fished by the purse seine fishery for tuna farming in the Mediterranean Sea, and introduce recent ICCAT initiatives to overcome this problem by sequential implementation of the use of



the stereoscopic video cameras (SVC) and improvement of its measurement accuracy.

BFT official CAS and 1st estimates from farms: average % 2003 2011



Small dots: back calculated data, Large dots: official data used for stock assessment, Unit: fork length cm

Introduction and use of the SVC in ICCAT

It has been widely known that the estimation of the total catch in numbers and size of bluefin has become difficult after the introduction of tuna farming that uses live fish transferred from purse seiners that produce the majority of the Atlantic bluefin catch in the Mediterranean Sea. Live bluefin caught by the purse seiners are transferred to towing pens and then again to farming pens. Therefore, conventional methods to measure the fish at landing ports has become impossible. In addition, the catch and size statistics of bluefin caught by the purse seine fishery had been poorly estimated due to inadequate samplings and

incomplete data provisions. Therefore, it is suspected that the number of fish caught and measured in the past and used in the stock assessment (official statistics) would be inaccurate and biased. This suspicion was partly confirmed by comparing reported catch at size composition at the time of capture (official statistics) with that at the time of capture estimated by back calculating from the actual size measurements at the time of harvesting the farmed tuna (Figure, cited from A. Fonteneau, SCRS/2013/076). The comparison was made for two consecutive years when there was not much use of the SVC. The figure shows a significant difference in the length compositions estimated by the two methods, i.e., there are more small fish estimated under 100 cm based on the official statistics than those based on back calculation while there are more large fish over 200 cm in the back calculated composition than those based on the official data. This suggests the total catch in weight based on the official data is smaller than that based on back calculated data, thus, the official catch reported is underestimated. Therefore, it is inferred that the currently used catch and size data cannot be used for the assessment unless the suggested bias is somehow corrected.

Then, use of the SVC has become the trump card to solve this problem as this makes it possible to count the number of fish and measure their size when the fish are transferred live into the farming pens. Although size measurements and catch reports of the Atlantic bluefin caught by the purse seine fishery have been improving in recent years, further improvement is still needed to have more accurate catch and size data. To fulfill this objective, two years ago ICCAT made it compulsory to use the SVC for fish caught by purse seiners and transferred to tuna farmers, and last year more detailed instructions were adopted for the use of the SVS in measuring the fish. The maximum size of tunnel nets used in transferring the fish from towing pens to farming pens was set (10m x 10m) and 20 % of the fish in the transfer must be measured (one fish in every five fish). In addition, the SCRS was requested by the Commission to solve other technical issues for improvement of SVC measurements.

Use of the SVC by other regional fishery management organizations

Let us briefly look at the current situation of use of the SVC in other regional fishery management organizations (RFMOs). In the Pacific, there are two management bodies dealing with the management of tuna farming, the Western and Central Pacific Fisheries Commission (WCPFC) in the Western and Central Pacific and the Inter-American Tropical Tuna Commission (IATTC) in the Eastern Pacific. Japan and Mexico are currently the only countries to operate bluefin farming in the WCPFC and the IATTC areas, respectively. Meantime, Australia is the only country which practices southern bluefin tuna farming in the area under the management of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) but I do not comment on the Australian case this time, other than urging its prompt use of the SVC, as I have already commented in the previous issue of this Newsletter. In case of Japan, when the farmers buy the seed fish, they check the healthiness of each seed. Thus, the number and size of

the seed fish are accurately recorded. Hence the use of the SVC is not required. A small portion of Japanese tuna farmers use the seed fish ranging from 2-6 kg taken by the Japanese coastal purse seiners and use the SVC for ensuring accuracy of the catch information. In the Eastern Pacific, Mexico started to report the size of bluefin measured by the SVC from this year.

ICCAT has been playing a pioneer role in world tuna management. It took several steps to establish relevant measures with the SVC use recognizing that it is essential to secure the accuracy and transparency of the bluefin catch data by the purse seine fishery and used for tuna farming. Newly strengthened regulatory measures introduced last year in ICCAT are a significant step to reduce uncertainty of the stock assessment and will spread to other tuna RFMOs like the CCSBT, WCPFC and IATTC.

S. Pacific albacore

Urgent need for stock assessment of South Pacific Albacore

The scientific committee of Western Central Pacific Fisheries Commission (WCPFC) reported last year that “Pacific Island domestic fleets, which are dependent on albacore, continue to experience diminishing CPUE-catch per unit effort, thereby affecting profitability and in many cases, survival. According to the report, the total South Pacific albacore catch in 2012 (89,259 mt) was a 24 % increase over 2011 and a 22 % increase over 2007-2011. Longline catches (86,064 mt) increased 25 % from 2007-2011. Troll and other catches (3,158 mt) were down 8 % on 2011, but up 15 % on 2007-2011. Furthermore, the report states that it should be emphasized that increasing catch and effort on South Pacific albacore has occurred from 2009 to 2012, which is a concern. The current management measures appear not to be effective in constraining effort in the subtropics (south of 20 degree S). Sun Business, a local newspaper in Fiji recently reported that two major fishing companies have been shut down most of their operations in Fiji and the two companies’ cut back are only just part of the bigger tuna collapse occurring across the Pacific region.

OPRT contacted Mr. Charles Hufflett, Immediate past Chairman of the Pacific Islands Tuna Industry Association to verify the current situation in the region. He said,

“No stock assessment was conducted for South Pacific albacore tuna in 2013, although the scientific committee expressed a concern on the fact that increasing catch and effort on South Pacific albacore has occurred from 2009 to 2012. Tuna fleets in some South Pacific island countries are facing real problems now for survival. In order to ensure sustainable tuna longline fisheries in the region, the status of albacore should be urgently assessed by the scientific committee, followed by introduction of the adequate management measures by WCPFC. Management measures must include limiting the exponential growth of vessel numbers.”

Seabird conservation

Holistic approach is crucial for seabird conservation

In some fishing grounds, incidental takes of seabirds chasing bait fish happen during tuna longline operations. Longline fishermen have long been taking steps to avoid the seabird incidental take as it hampers their fishing operations. Ideas and efforts of crew have been accumulated in developing ways and means to reduce incidental takes. At present, the use of Tori-pole and night-time line setting and other means are being practiced as management measures in regional tuna fishing management organizations, with tangible results in promoting the conservation of seabirds.

Efforts by tuna longline fishermen alone are not sufficient to make conservation of seabirds truly effective. Equally important are the efforts to prevent marine pollution and protect seabird nesting grounds. In nesting places, not only the measures to prevent the attack on seabird eggs and juveniles by feral animals but also the measures to hold in check the loss of the fishing grounds themselves are necessary. In sum, it is crucial to take a holistic approach to determine various factors affecting seabirds over the broad spectrum of seabird life cycle and implement appropriate measures steadily and on a case-by-case basis. Real conservation of seabirds will not be achieved only by focusing on the impact coming from tuna longline fishing.

Torishima Island in Japan's near-shore area is well-known as a major nesting place of albatrosses. The population of albatrosses in the area was said to have been endangered to the brink of extinction at one time, but, as a result of efforts, led by Prof. Hiroshi Hasegawa of Toho University, to conserve the disappearing nesting grounds, the population is now estimated to have rebounded to 3,000 individuals, with a prospect of reaching 5,000 individuals by 2019. Such efforts are valued highly by people concerned as a true form of seabird conservation campaign.

Topics

Japan's OPRT members donate Philippines damaged by Typhoon Haiyan

Japan Tuna Fisheries Cooperative Association (JT) and National Offshore Tuna Fisheries Association (NT) donated USD50,000 to Philippines to help people still facing hardship caused by the Typhoon Haiyan hit the country last November. JT and NT called their member tuna longline fishermen for the voluntary donation. Philippine International Tuna Longline Association added its

personal fund to the donation provided by Japan's OPRT members and donated all to Buddhist Tzu-Chi Foundation of Philippines. The Typhoon caused flooding, landslides and widespread damages and killed over 6,000 people.

Behind the Year's First Auction Price of Bluefin Tuna

"It would exceed more than one million US dollars," a reporter wrote on his website in December given the fact that one 222 kilo Pacific bluefin tuna fetched 1.76 million dollars last year, the record highest price in the history of the Year's First Auction at Tokyo Tsukiji fish market. People's interest around the world was therefore turned to the Year's First Auction held on January 5, this year.

The result was that one 230 kilo Pacific bluefin tuna fetched 74,000 US dollars, 1/20th of the price fetched last year. "I am glad that the congratulatory price of the first auction returned to be reasonable", said Kimura, owner of a sushi restaurant chain in Japan, who again won the bidding this year following his winning bid last year.

The bidding on bluefin tuna at the year's first auction had been exorbitantly high these past several years because of hard bidding fueled by pride between Kimura and the owner of a sushi restaurant in Hong Kong. However, the owner of the Hong Kong sushi restaurant did not bid this year, saying that he had returned to his senses and stopped such bidding. The bidding price of the year's first auction is customarily higher than usual as a congratulatory price wishing for new year's prosperous business. But these high bidding congratulatory prices, and especially that of last year, are abnormal and obviously have nothing to do with the status of the stock.

Talking about the stock condition, the scientific committee has pointed out the risk of the spawning stock biomass falling below its historically lowest level. In responding to such risk, the Western Central Pacific Fisheries Commission (WCPFC) introduced measures at its annual meeting held in last December to reduce



Photo by courtesy of the SUISAN-KEIZAI

the annual average catch of juvenile Pacific bluefin tuna by 15% from that recorded during the period 2002-2004. As the largest fishing and consuming country of Pacific bluefin tuna in the world, Japan is obliged to make its best efforts to conserve and manage the resource for ensuring sustainable use. The Japanese Fisheries Agency is well aware of such obligation and commits itself to take proper action along with measures adopted by the WCPFC.

ICFA resolution

ICFA appeals crucial contributions of fisheries to global food security

International Coalition of Fisheries Associations (ICFA) adopted a resolution regarding the contribution of fisheries to global food security on February 13, 2014. Having concerned with the recent movements by extreme protectionists to protect marine resources without reasonable scientific backgrounds, Japan Fisheries Association proposed the draft and ICFA members unanimously supported it. OPRT supports, in particular the following elements incorporated in the resolution:

- a. importance of responsible fish trade
- b. need of scientific ground for the regulations of fisheries and fish trade
- c. fishermen's proactive engagement in fisheries management
- d. FAO's important role in dealing with conservation and sustainable development of marine resources. The resolution is as follows.

RESOLUTION REGARDING THE CONTRIBUTION OF FISHERIES TO GLOBAL FOOD SECURITY

WHEREAS ICFA

Recalls the Kyoto Declaration and Plan of Action on the Sustainable Contribution of Fisheries to Food Security adopted at the International Conference on the Sustainable Contribution of Fisheries to Food Security (Kyoto, Japan December 1995) and conveyed to the 1996 FAO World Food Summit.

Is concerned that the rate of progress in hunger reduction is far below the rate to reach the 1996 World Food Summit (WFS) target, which is to halve the number of hungry people by 2015, and that even today, globally, 842 million people, which is around one in eight people in the world, are likely to have suffered from chronic hunger.

Recognizes that fisheries and aquaculture make crucial contributions to the world's wellbeing and prosperity, and that fish constitutes an important source of nutritious food and animal protein for much of the world's population, and that the sector provides livelihoods and income, both directly and indirectly, for a significant share of the world's population.

Recognizes that responsible fish trade is important source

of food security and incomes particularly for developing countries.

Notes that properly managed fisheries enable sustainable food production with minimal impact on ecosystem, and is concerned that such role of fisheries is not well understood by the global community because of which, movements toward extreme fisheries regulation never cease.

Is concerned that regulation of fisheries and fish trade not based on scientific grounds hampers optimal production of seafood, disturbs animal protein supply system, and thereby increases the environmental impact on terrestrial ecosystem.

Recognizes that fishermen's proactive engagement in resource management and enhancement of sustainability is essential for contribution fisheries to food security.

ICFA, therefore,

1. Requests the FAO (United Nations Food and Agriculture Organization) the following for the purpose of fulfilling the FAO 's mission, "Achieving food security for all is at the heart of FAO's efforts – to make sure people have regular access to enough high-quality food to lead active, healthy lives."

The FAO plays a principal role in issues regarding conservation and sustainable development of marine living resources.

The FAO takes the lead on issues regarding conservation of marine ecosystems to ensure that adopted conservation measures are based on scientific grounds and in harmony with sustainable fisheries.

The FAO strengthens public relations to improve understanding of role of fisheries in human food security by the global community

2. Urges all nations to reconfirm the importance of contribution of fisheries to food security and be engaged in promotion of sustainable fisheries with proper conservation measures.

3. Resolves to further commit to promotion of responsible fisheries in order to ensure contribution of fisheries to food security.

The International Coalition of Fisheries Associations (ICFA) is a coalition of the national fish and seafood industry trade associations from the world's major fishing nations. ICFA members represent countries harvesting more than 85% of the globe's fish. The group was formed in 1988 to provide decision-makers a unified voice on global fish and seafood issues. ICFA members advocate policies for the long-term sustainable use of living marine resources for the benefit of global food security and prosperity. ICFA members are deeply committed to science-based and fully participatory fishery conservation and management processes.