THE ORGANIZATION FOR THE PROMOTION OF RESPONSIBLE TUNA FISHERIES

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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

Pacific bluefin tuna

Japan enhances timely monitoring of recruitment

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National Research Institute of Far Seas Fisheries, Fisheries Research Agency

The Pacific bluefin tuna is an important fishery resource not only for Japan, but also for other countries such as Korea, Taiwan, the United States and Mexico. The latest stock assessment on this species by the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) revealed the high fishing pressure on the juveniles (0-3 years old) in recent years. In accordance with this result, the Western and Central Pacific Fisheries Commission (WCPFC) adopted the recommendation to reduce the catch for Pacific bluefin tuna juveniles. Considering this situation, the National research Institute of Far Seas Fisheries (NRIFSF) has conducted various researches and surveys funded by the Fisheries Agency of Japan.

Recruitment of 0-year-old Pacific bluefin tuna juvenile fluctuates dramatically year by year. Thus, appropriate fishery management corresponding to such fluctuated recruitment is needed for enhancement or sustainability of the resource. For that, it is important to monitor the recruitment intensity as early as possible. However, the conventional monitoring methods take about a year to evaluate the 0-year-old recruitment abundance.

Pacific bluefin tuna larvae hatch around the Nansei islands and the juveniles migrating to the coastal area of western Japan are caught by troll fishery. Field researches were started in Kochi and Nagasaki Prefectures to develop the methods for timely monitoring of the intensity of 0-year-old fish recruitment. Data logging equipment to record location of boats, catch information and water temperatures in the fishing operation was installed onboard more than 20 fishing boats. The equipment can

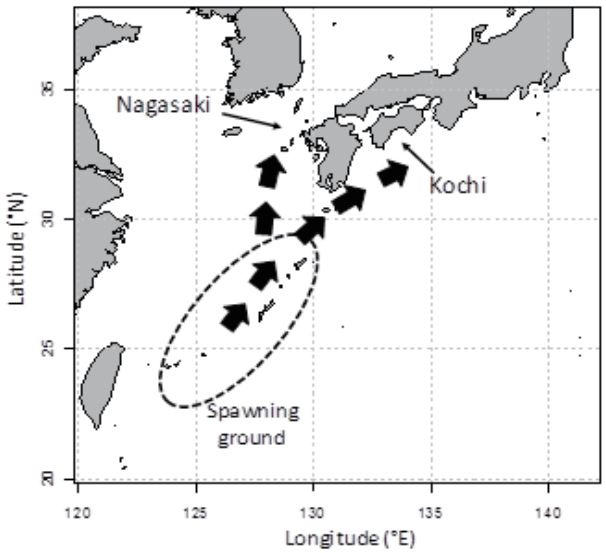

Fig.1 Spawning area the Nansei islands and the estimated migratory routes for western Japan

Fig.2 Trolling vessel in operation and its target, 2 to 3-month-old Pacific bluefin tuna juvenile

transmit data on a real time basis. This research provides daily CPUE (Catch per Unit Effort; in this case, catch amount per boat-day), which improves timely monitoring of recruitment of fish. For the future work, research area will be expanded to the Sea of Japan, which is the second largest spawning ground of this species. It will help us to monitor the overall recruitment trends of the Pacific bluefin tuna.

For further information, please contact oshimaka@affrc.go.jp

Tuna RFMOs

ICCAT

Atlantic bluefin tuna stock is recovering

The Scientific Committee of the International Commission for the Conservation of Atlantic Tunas (ICCAT), held in Spain from 1 to 5 October, recently published its provisional report concerning the state of bluefin tuna in the East Atlantic and Mediterranean Sea.

It states that the spawning stock biomass showed clear signs of increase although both the speed and magnitude of this upward trend remain uncertain.

The Committee recognized that the increase is likely a reflection of positive outcomes from recent management measures and noted that maintaining the current Total Allowable Catch (TAC) (12,900 t) or at the 2010 TAC (13,500 t) under the current management scheme will likely allow the stock to increase.

TAC for next year will be determined at ICCAT's annual meeting scheduled for 12-19 November in Morocco based on the recommendation by the Scientific Committee.

CCSBT

CCSBT makes a progress toward ensuring transparency

The annual meeting of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) was held in Takamatsu, Kagawa Prefecture, Japan, in Oct. 1-4.

The meeting reconfirmed to maintain the total allowable catch (TAC) and national allocations applicable from 2012 to 2014, as agreed last year based on the Scientific Committee's recommendation. (The TAC was set as follows: 10,449 tons in 2012, 10,949 tons in 2013 and 12,449 tons in 2014. See OPRT web. (Data) for national allocations.)

Another focal point at the meeting was the issue of compliance with the management measures. The participants agreed that countries concerned should expand its efforts for data submission with the aim to ensure transparency in the catch and distribution of southern bluefin tuna (SBT).

With regard to the issue of compliance, the discussion specially centered on the introduction of stereoscopic video monitoring device to count the number, and measure the size, of SBT in the cages with an eye toward implementing management measures for farmed tunas, which were expected to be introduced in coming December.

The meeting recognized that there are no technical problems in introducing stereoscopic video monitoring camera and the device has a high precision to determine the number and size of SBT, when compared with the sampling survey on 40 individuals. Australia indicated its intention to introduce the device next year, although it could not do so this year.

Masahiro Ishikawa, head of Japan Tuna Cooperative, who attended the meeting, stated that it is crucially important to ensure transparency of the catch and distribution in stock management, saying this should not be limited to tuna farming.

This meeting marked a step forward in that the countries concerned agreed to abide by the rules and get rid of nontransparent elements in the current management system, Ishikawa said.

ICFA meeting

ICFA discusses global fisheries issues

The International Coalition of Fisheries Associations (ICFA) held its annual meeting in Rome on October 10 and 11.

Members reviewed issues related to the global fisheries, such as Marine Biodiversity, Marine Protected Areas (MPAs), Fish Aggregating Devices (FADs), marine ecolabel.

During the discussion on FADs, the Japan Fisheries Association stated that the fundamental problem concerning FADs lies in overfishing capacity of large

scale purse seiners. Despite the recommendation by the joint meeting of tuna regional fisheries management organizations adopted last July, no measures have been taken yet to freeze the capacity of large scale purse-seine fishing vessels of developed fishing nations.

Japan has frozen the number of its large scale purse-seine fishing vessels and is requesting other members to take similar action like Japan. It was agreed that the position of ICFA should be established through communication, taking the JFA's statement into consideration.

Jiro's critical eyes

Immediate need to use stereoscopic camera for tuna farming

Jiro Suzuki
National Research Institute of Far Seas Fisheries

Accurate catch in weight and size of fish caught by purse seiners can not be obtained.

It is a serious problem especially for management of Atlanic bluefin tuna farming using large amount of fish. The data currently provided by farming is less accurate because of difficulty in obtaining data of individual fish. The problem stemmed from the fact that bluefin for the farming must be kept alive, thus the routine weighing and sizing of individual fish are not possible. Because stock assessment is highly dependent on length data of fish, this situation puts not only scientists in plight but also managers who have to control catch quota.

To overcome this problem, optical method using stereoscopic (video) camera has been developed and widely tried for putting into practical use in many places of the world. This method makes it possible to measure number and weight of individual fish (through conversion factor from size to weight) without touching the fish,while keeping it alive. The result of experiments is encouraging and this method is likely to be the best practical way to be used at present. This method has still a few technical problems, e.g., densely packed school swimming in a high speed, rough sea condition and low transparent waters hamper to recognize an individual fish.

However, it is considered that problems can be solved by appropriate methods. The use of the stereoscopic camera also help to improve quality of the Bluefin Catch Documentation Scheme recently implemented. The Scientific Committee of the ICCAT recommended this year that setting up a technical working group to establish procedures for implementing stereoscopic camera systems by 2013. The need to ensure transparency of farming is increasing. Efforts should be made to expedite the introduction of the system as soon as possible.

Dr. Jiro SUZUKI is a leading tuna scientist who had worked for National Research Institute of Far Sea Fisheries in Japan more than 30 years. He has particiapted 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)

Dr. Miyake's Tuna Chat

Tuna longline and sustainability

Dr. Makoto Miyake
Visiting Researcher at the National Research Institute of Far Seas Fisheries

Recently, “sustainable” and “eco-friendly” seem to have become most fashionable words in the world. From politicians to high school students, these terms are being used as “papal indulgence”. Any action or object becomes holy and justified the moment these words are attached to them: sustainable eco-friendly source of energy; eco-friendly fridge and so on.

In the fisheries science, the word, “sustainable” can be found in text books as early as over 50 years ago. Therefore, it is nothing new for us. None-the-less, recently, this type of argument has become very active. Some say that tuna longline fishing is not sustainable as they target spawners, while others even argue that longline fishing is not eco-friendly as they have by-catches of non-target animals and consume more combustion.

However, these arguments are all relative (i.e. less sustainable or more sustainable etc.) since human beings themselves are destructive forces to the earth’s eco-system. Any human action -- including industry, agriculture, and fisheries -- changes the natural environment and eco-system, and any substance in the world is non-sustainable in the long-run.

Taking these facts into consideration, the question we must then ask is whether tuna longline fishing is indeed more destructive than other fishing methods? Longline fishing is a very passive method, just waiting for the fish to bite the baits. It only randomly extracts a part of

the fish stock and hardly causes any excessive catches. Particularly, the longline catch rate (hooking rate) is correlated very closely with the stock size. Therefore, if stock size shows any reduction, it is immediately reflected by the proportional reduction in the catch rate of longline fishing, which is not the case in other tuna fisheries. For example, in surface fisheries, when stock size is reduced, the area of fish distribution or number of fish schools might be reduced, but the school size tends to stay stable. Therefore, stock reduction is not directly reflected in the catch rate.

As longliners are fishing at the margins of economic break point, the declined catch rate -- which means reduced profit -- would discourage fishing. Hence, the quantities of efforts of this fishery are controlled by economics responding to the stock size. When longline used to be the only offshore tuna fishing method in the world (i.e. 1950-1970), tuna stocks had never experienced serious depletions by excessive fishing. All the problems of excessive fishing started only after the development of large-scale surface fisheries, such as the cases with west Atlantic bluefin, Pacific bluefin, southern bluefin, and bigeye tunas all over the world.

Ironically, the more efficient the fishing gears are, the more destructive they are for the fish resources. If the choice is between more efficient gears and sustainable use of fish resources, then scientists would choose sustainable use of fish resources. The only problem with this choice、if extreme, is that the fish stocks would be sustainable but fishery might not be.

Topic

The best design for the seal appealing “ October 10 is the Day of Tunas”

OPRT arranged a contest in Japan for two months during July and August to collect the seal design in order to appeal the revival of “the Day of Tunas on October 10.”

The selection of the best design was conducted by the OPRT Selection Committee for 977 entries sent from applicants ages 5 to 87 all over Japan.

Miss Mai Endo, a 20-year-old student at a designer school was rewarded Yen100,000 and the highest quality of bluefin sashimi as the best designer of the seal.

OPRT carried out the nationwide campaign from October 1st to 10th, using the seal, with cooperation of fish retailers, supermarkets, tuna restaurants and so on with the aim to appeal the public on the need of tuna resource management and OPRT’s activities to promote responsible tuna fisheries.

(Shown in the right column is the best design by Miss Endo)

October 10 is the Day of Tunas

October 10 is the Day of Tunas. This date was established by Japan's tuna industry in 1986 based on the old poem in Man'yoshu (Collection of Myriad Leaves)–the oldest existing anthology of poetry compiled in Nara Period (710-794 A.D.)–with the aim to promote domestic consumption of sashimi-grade tunas. The Day came not to be remembered widely amid the waves of restructuring of the tuna industry in Japan.

The industry is now trying to revive this memorable occasion in light of the fact that demand of all kinds of seafood including tunas is decreasing in Japan.

When we look at the current excessive catch of major tuna species, I believe that it is significant to locate "the Day of Tunas" from the global perspective as one that promotes cooperation in the international society to ensure the sustainable use of the resource. What do you think about it?

The Day of Tunas marked at a major supermarket
(Photo by SUIKEI)

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