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**The Republic of Korea's Information Paper on the Bycatch of Pacific Bluefin Tuna in
Set Net Fisheries in its Territorial Waters**

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Republic of Korea

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Ministry of Oceans and Fisheries of the Republic of Korea

Background

In late July 2022, right after the seventh Joint IATTC-WCPFC NC working group meeting on PBF Management, several incidents of discard of Pacific bluefin tuna at sea which ended up beaching in the areas off the coast of Gyeongsangbuk-Do were reported by a number of Korean news media and the issue immediately became a sensation as it was directly related to the livelihood of artisanal fishermen and marine pollution. The fact that all the discarded Pacific bluefin tunas were unintended bycatch in the set nets set in the territorial waters attracted keen attention of general public as well as the Government of Korea.

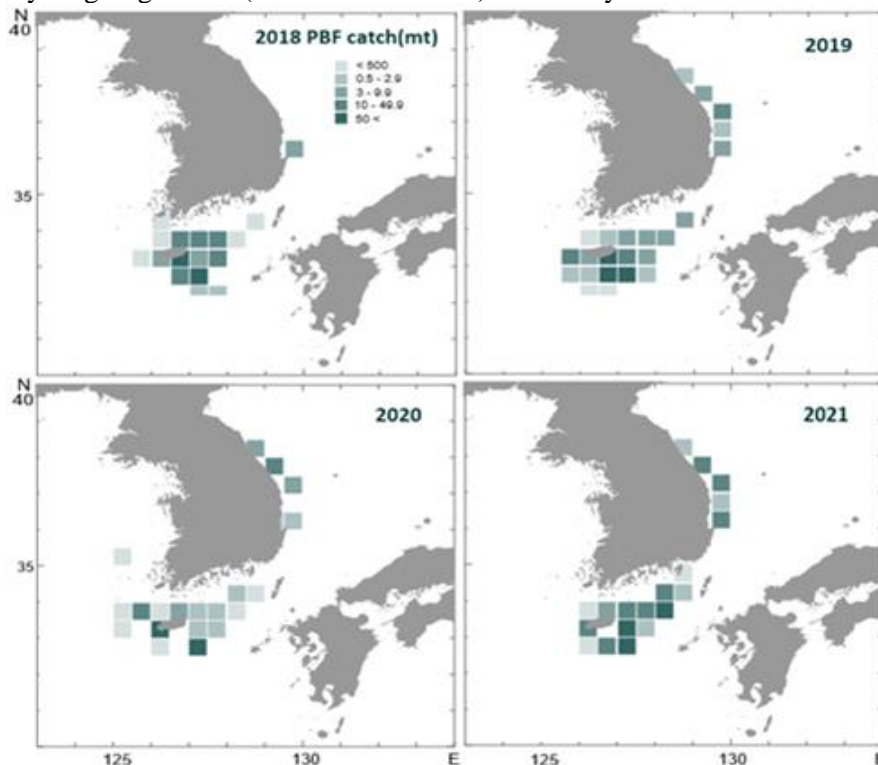


Why did the discards take place?

Usually, a small portion (less than 5%) of Korea's national catch limit of Pacific bluefin tuna is initially allocated to set net fishery as the total amount of Pacific bluefin tuna caught in the set nets was small, according to the reported historical records. Although the Ministry of Oceans and Fisheries allocated additional quota to set net fishery several times in the first half of 2022 noting the increasing trend of Pacific bluefin tuna catch in the set net fishery, a large amount of bycatch reportedly took place in the territorial waters.

We were not able to find out exactly when and where the discards took place but we presume that some fishermen discarded the fish due to limited quota for set net fishery as the sale of Pacific bluefin tuna caught exceeding the allocated quota by fishery is strictly prohibited under Korea's current management regime. Despite Korean government's effort to enlighten the fishermen, in the absence of incentives for reporting, only a few incidents of discard are reported by the fishermen although we believe there could be more discards occurring at sea.

At the same time, we suspect that the amount of Pacific bluefin tuna stock occurring in the territorial waters as well as the EEZ of Korea must have increased dramatically in recent years and that there must have been some changes in the pattern of the migration of Pacific bluefin tuna, most likely due to the climate change. Usually, main fishing grounds of Pacific bluefin tuna were formed around Jeju Island (33°10'N~34°35'N) in the past, but the amount of catch (including bycatch) showed an upward trend in other areas in the higher latitude such as coastal areas of Gangwon-Do (37°02'N~38°37'N) and Gyeongsangbuk-Do (35°34'N~37°33'N) in recent years.



What are the characteristics of Korea's set net fishery?

Set net fishery is common in most coastal areas of Korea. Korea's set net fishery does not target Pacific bluefin tuna. Yellowtail (*Seriola quinqueradiata*), squid and Japanese Spanish mackerel are the most

frequently caught species. Set nets are set in the territorial waters of Korea by artisanal or small-scale fishers throughout the year. The fishery is managed by a licensing system which controls the number of licenses.

What has the Government of Korea been doing to address the issue?

Since it was impossible to estimate the amount of Pacific bluefin tuna discarded by set net fishermen, the Ministry of Oceans and Fisheries(MOF) reserved approximately 100 tons of quota to accommodate the catch and discards in set net fishery in addition to the initial quota allocation. Once the accumulated catch in the set net fishery got close to or reach the total quota available to set net fishery at a given time, the MOF ordered the set net fishermen to stop retain or land Pacific bluefin tuna. Then, the MOF allocated additional quota to set net fishery and allowed the fishermen to retain and land the fish again. This process was repeated multiple times this year.

The MOF, National Institute of Fisheries Science(NIFS) and the local government had several rounds of consultations including face-to-face meetings. The consultations focused mainly on the quota management, improvement of monitoring/reporting of set net fishing activities and ways to secure sufficient budget for the purpose of addressing the issue.

What will the Government of Korea do to address the issue in future?

First and the foremost, once agreed, Korea would like to make its best effort to manage Pacific bluefin tuna catch in its set net fisheries within its national catch limit based on the suggested interim management plan in 2023 and 2024 at least :

- The amount of initial quota allocated to set net fishery will be increased.
- Korea will not increase the number of set net fishery licenses from the current level.
- The amount of initial quota allocated to purse seine fishery will not be increased from the current level(average in recent 3 years).
- Korea will adjust the initial quota allocations to respective fisheries to the extent possible during the fishing season to accommodate any unexpected circumstances.
- Feasibility studies on release techniques will be conducted from 2023 and such techniques will be applied to set net fisheries gradually as soon as possible, depending on the results of the studies.

In addition, certain type of electronic monitoring system will be introduced for set net fisheries in 2023 as a pilot project. We managed to secure some national budget for this purpose for 2023 and monitoring cameras will be installed on set net support vessels on which species identification and discards of Pacific bluefin tuna take place.

Further, fishery data including catch and discard information in the set net fisheries will be submitted to the JWG, NC, SC, TCC and the Secretariat as well as the Commission in a transparent manner not only for scientific purpose but also compliance monitoring purpose.

What would be the risk of the continuation of current situation of set net fisheries?

Unfortunately, as mentioned already, there aren't any incentives for set net fishermen to report the discards and it takes some time and budget for us to improve the data collection system which relies largely on reports from set net fishermen and market data at the moment.

If the current situation continues, it is very likely that unreported discards will continue to take place and have serious negative impact on the stock assessment as well as the stock itself as we wouldn't be able to figure out how much Pacific bluefin tuna is caught and/or discarded in the set net fishery. In its conservation advice for Pacific bluefin tuna, ISC mentioned that discards should be considered in future harvest scenarios.

Moreover, the issue may also lead not only to a social unrest in the coastal communities but also to unnecessary and uncontrollable marine pollution.

Suggested interim management plan

Given the explanation above, the Republic of Korea submitted a proposal to amend the current CMM 2021-02 for Pacific bluefin tuna to the 18th Regular Session of the Northern Committee for discussion. We regret that this information paper and the proposal were not submitted to the JWG07 meeting but it should be noted that the incidents of discard of Pacific bluefin tuna took place after the meeting. As such, we seek kind understanding and consideration from the Members of IATTC who have substantial interests in Pacific bluefin tuna fisheries, in particular.

The main points of the proposal are as follows :

- In the event that the total amount of Pacific bluefin tuna catch in the set net fishery in a given year is unexpectedly and unusually large in its territorial waters, the Republic of Korea may choose to apply an alternative Pacific bluefin tuna fishery Management Plan.
- Pacific bluefin tuna catch in set net fishery may be retained and landed for domestic consumption or sale at the designated market even if such catch takes place beyond Korea's national catch limit.
- A pay-back should not be required provided that Korea ensures that its set net fishing effort in terms of the number of licenses and the amount of initial quota allocations to fisheries other than set net fishery for the very next year do not exceed the existing level.
- For any Pacific bluefin tuna catch taken beyond the national catch limit, the Republic of Korea should submit a catch report to the Secretariat on a monthly basis for CCMs information.
- The Republic of Korea should make its best effort to collect fishery data including catch and discard information in its set net fisheries to the extent possible and submit such data in a transparent manner.

Conclusion

Pacific bluefin tuna caught in the set nets would die anyway unless and until an effective release technique for set net is developed and implemented. By allowing Korean set net fishermen to consume or sell the catch domestically, we would be able to acquire much more accurate fishery data for stock assessment, prevent marine pollution and improve the livelihood of artisanal fishermen. Again, we would like to emphasize that **a large amount of Pacific bluefin tuna will be caught in set net fisheries and die anyway whether or not we apply the suggested interim management plan.** Until a more systematic and effective data collection system including fishery monitoring tools for set net fishery is established, allowing Korean set net fishermen to consume or sell the by-caught Pacific bluefin tuna domestically even after the full utilization of quota allocated to set net fishery would be the most practical way to address the problems of non-reporting of discards, marine pollution and possible social unrest.