

Annual Report of Taiwan to ERSWG5

Fisheries Agency of Taiwan

1. Introduction

In the past, southern bluefin tuna (SBT) was only bycatch of Taiwanese tuna longline fisheries. However, many vessels with deep-frozen facility started to seasonally target on SBT in recent years to gain better profits. With constraint of vessel design, most Taiwanese vessels are unable to operate in the areas under environment of very low temperature and strong waves. Therefore, their fishing grounds have been limited among the middle/high latitudes of 30 and 40 degree south.

Seabirds usually show around the fishing grounds at such middle/high latitudes. Seabirds grab baits on hook during the hook-casting process causing loss of baits and incidental death of seabirds. Therefore, most vessels have adopted various measures to avoid catching seabirds, such as hook-casting during the night time, tori line installation, using de-frozen baits, etc. Regarding other ecologically related species (ERS), the incidental catch rates on sea turtles, sharks, and cetaceans have been dramatically low.

2. Review of SBT fisheries

Historically, annual catches of SBT were smaller than 250 mt in the early 1980s. Afterwards, due to the improvement of vessel facilities, fishing grounds and target species have also been changed. Except capturing albacore, our fishermen have also capturing SBT in the specific seasons. From 1989 onwards, annual catch of SBT surpassed 1,000 mt. After then, the SBT catches fluctuated between 800 and 1,600 mt. (Fig. 1) Since CCSBT has been established, Taiwan, in accordance with the CCSBT conservation and management measures, we have voluntarily set up a limitation of catching SBT to 1450 mt. During 1996-2001, the average of

annual catch in SBT maintained around 1450mt. After joining CCSBT, we sacrificed and reduced 310 mt of our historical catch, and set up our catch limitation into 1140 mt.

Their catches were mainly made in the waters of 30°S - 40°S in the Indian Ocean and seas adjacent to the Atlantic Ocean (Fig. 2). There were two clear fishing grounds in general: one in the central Indian Ocean around 55°E-95°E, 30°S-40°S, and another off the southeast coast of Africa around 30°E-55°E, 35°S-45°S. Seasonally, the fish was caught in the southern and central Indian Ocean during June to September, and in the southern and western Indian Ocean extending to the eastern limit of the Atlantic Ocean during October to February of the following year.

3. Fisheries Monitoring for Each Fleet

To monitor SBT fishery, Taiwan has taken various measures including requiring fishermen to provide daily logbook/weekly catch report, requiring installation of vessel monitoring system on board, implementing statistical document program (TIS), and promoting pilot observer project.

The items in logbook required mainly include fishing area, fishing effort, catch species composition, bait used, surface water temperature, and length data of sampled 30 fish. To gain more data for ERS, the logbook has been revised to include information of incidental catch for sharks, seabirds, sea turtles, and cetaceans.

In addition, vessels fishing for SBT are gradually required to install VMS so their positions can be monitored. Furthermore, the TIS has been implemented to manage the catch of individual vessels.

4. Seabird

The two fishing seasons of Taiwanese vessels fishing for SBT are June through September and November through February the following year.

Areas among 30-40 degrees of south latitude in the Indian and Atlantic Ocean are their major fishing grounds. The lower latitude the vessels operate, the less frequency and number of seabirds encountered to those vessels. Wandering albatross (*Diomedea exulans*), sooty albatross (*Phoebetria fusca*), white-chinned petrel (*Procellaria aequinoctialis*), grey petrel (*Procellaria cinerea*), and flesh-footed shearwater (*Puffinus carnipes*) are major seabirds sighted in the fishing areas.

The captains fishing on the areas of high latitude dramatically concern the bait loss due to seabird bites. To increase catch rate of target fish, reduce bait loss and incidental catch of seabirds, most captains take several measures at the same time to avoid seabird bites such as hook-casting before dawn, tori line installing, semi-defrozen baits, etc.

5. Other Non-target Fish

For Taiwanese vessels, southern bluefin tuna is the bycatch mainly caught by albacore-targeting vessels. Other non-target fish include bigeye tuna, yellowfin tuna, sharks, and billfish.

6. Marine Mammal and Marine Reptile

According to the observer data in 2002, sightings of cetaceans were very rare. Only one sighting of large cetacean was recorded. As for sea turtle, not any one had been sighted. The revised logbook form has been distributed to fishing vessels for recording information on marine mammals and sea turtles, therefore clearer information for those animals are expected in the future.

7. Mitigation measures to minimize seabird and other species bycatch Current measure

Mandatory Measures for Each Fleet

For the purpose of reducing seabird incidental catch, our government carries on encouraging or financing vessels that operate in areas of high latitude to set up tori lines. We have also revised the relevant domestic regulations for vessels fishing SBT. According to this regulations, all longline vessels which obtained permission to catch SBT are obliged to set tori line to increase the effectiveness of reducing the incidental catch of seabird if their operation area is southbound to 30° south latitude.

Regarding other ecologically related species, mandatory measure is mainly directed to sea turtles. In our “Wild Life Protection Act”, it’s forbidden for our fishermen to capture or possess the following kinds sea turtles, which are green turtle, loggerhead turtle, olive ridley turtle, leatherback turtle and hawksbill turtle. The incidentally caught sea turtles must be released and the fishermen are required to record this event in the logbook. Otherwise they will be punitive punishment if they violate this regulation.

Voluntary Measures for Each Fleet

With the intention of reducing seabird incidental catch and bait loss, we guide our vessels operating in high latitude areas where seabirds can often be found to adopt multiple seabird conserving measures. For example, casting hooks at night, setting up tori line, using bait casting machines and semi-defrozen baits and so on.

Additionally, in compliance with IPOA-seabird, Taiwan has started to draft NOPT-seabird to be acted as a basis for establishing seabird conservation policy. Similarly, regarding to sharks, we have also begun to draft NPOA-Sharks in addition to administrative guidance to encourage full usage of caught shark and avoidance of waste.

8. Public relations and education Activities

In 2004, the Taiwanese Fisheries Agency cooperated with BirdLife International and first ever held a conference entitled “Regional Technical

Workshop on Seabird By-catch and Mitigation”. Representatives joining the meeting came from the New Zealand, Japan, the U.S., Korea, the United Kingdom, and Taiwan. From this conference, participants had an opportunity to mutually understand mitigation measures, extension, and research undertaken in different countries. It’s been helpful for setting future working directions based on specific fishery characteristics of individual countries, and strengthening the international cooperation. BirdLife International sent Taiwan 1000 copies of posters entitled “Release seabirds safely and avoidance of capturing them” in Chinese. We immediately distributed the posters to our fishermen and associations concerned. It’s a good opportunity to express our appreciation to BirdLife International for their generous offer.

Additionally, in 1996 the Taiwanese Fisheries Agency published a pamphlet entitled “Catching fish, not birds- technical pamphlet for avoiding seabird incidental catch” in Chinese edition of 500 copies. The folding of “Catching fish, not birds: win-win measures for fisheries and seabirds” of 3000 copies were distributed in 2000. A teaching material on technically avoiding seabirds incidental catch has been edited for training captains and crewmembers at Deep Sea Fishery Research and Development Center of this Agency. In addition, the *in situ* technical exercise for setting up tori line is also conducted during the at-sea training. Beside, under the request of CCSBT, we provide Chinese translation service in “ERS seabird handbook”.

Although the incidental catch of other ecologically related species in our SBT fisheries is relative low, in view of the importance on conserving those species, we also edited various publications to enhance the concept of conservation. For example, identification sheets for sea turtles and shark were published to educate fishermen. In accordance with shark recourse conservation, it’s encouraged to fully utilize sharks instead of just finning. Moreover, we have inquired all local governments and related fisheries associations/organizations to strengthen that knowledge to fishermen. In addition, broadcasting for educating fishermen through

the professional fisheries radio has been conducted regularly. For sea turtles, we encourage fishermen to carry dip net and line clipper on board to safely release sea turtles. Meanwhile, We also distributed 3000 copies of folding entitled “Release the sea turtle incidentally caught” to our fishermen in 2003. Through distributing various publications and conducting educational activities, we are hoping to educate fishermen to enlighten their awareness of conservation. More importantly it’s anticipated to maintain a win-win situation where fishermen and ecologically related species can co-exist on this planet.

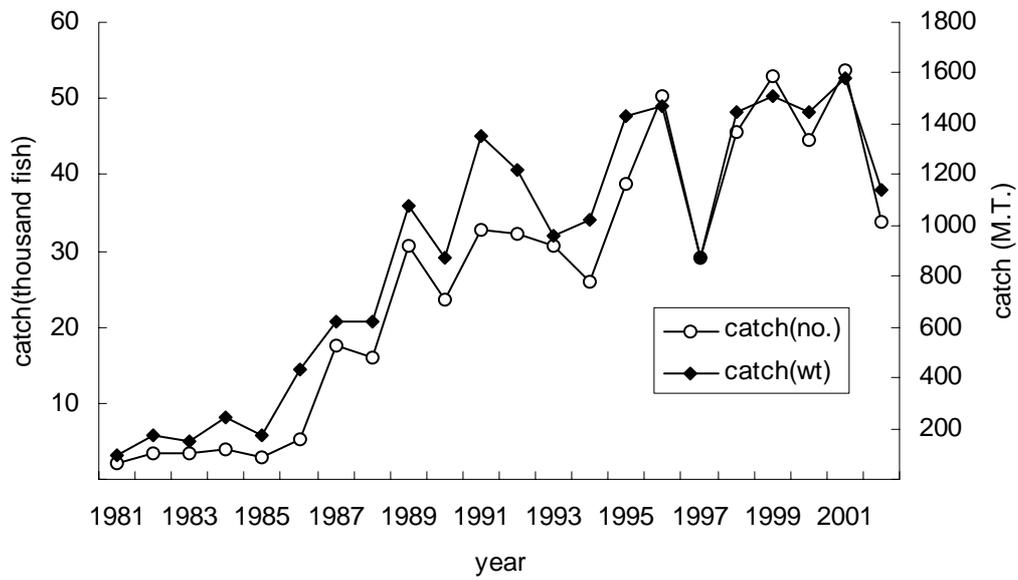


Fig. 1. The annual catch of SBT by Taiwanese longline fishery in number and weight from 1981-2002.

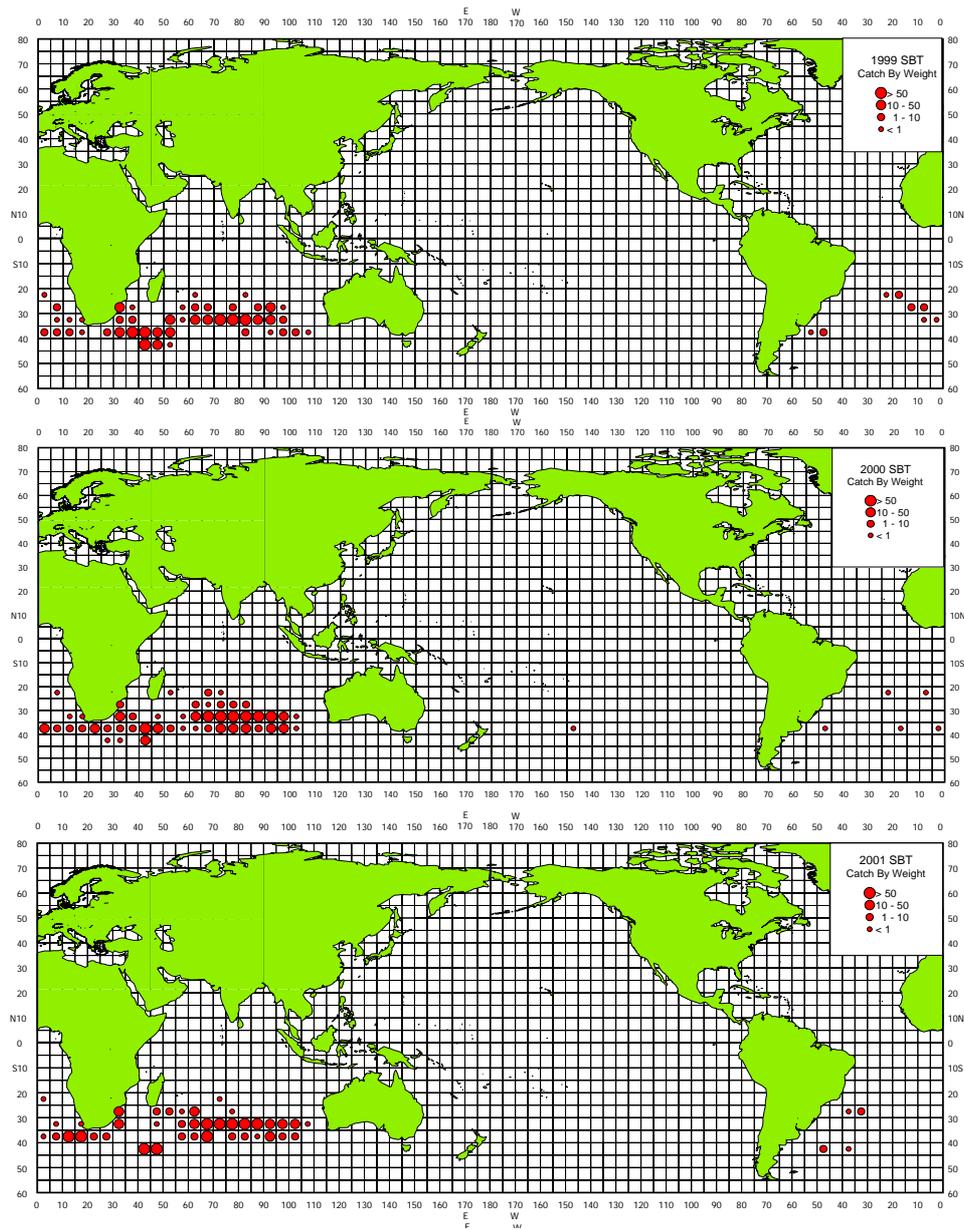


Figure 2. Catch distribution of SBT by Taiwan longline fishery from 1999 to 2001.