Preparation of Taiwan's Southern bluefin tuna catch and effort data submission for 2017

Abstract

The SBT fishery data submitted to the Extended Commission of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) from Taiwan includes total catch by fleet, aggregated catch and effort, catch-at-size, catch-at-age and non-retained catch data. The data submitted is compiled from logbook data, weekly report data and catch documentation scheme (CDS) data collected from authorized SBT fishing vessels with cross checking against VMS data, observer data and traders' sales records. There's no discrepancy found among datasets on catch.

1 Introduction

Overseas Fisheries Development Council (OFDC) is entrusted by Taiwan Government to compile SBT fishery data collected by Fisheries Agency of Taiwan(hereinafter FA), and is responsible for processing SBT fishery data provided annually to CCSBT as part of the annual data exchange.

According to CCSBT Data Exchange Rule, we have mainly submitted 5 fishery data in April 2017, namely:

- Total catch data by fleet for 2015 and 2016 by quota year and by calendar year.
- Aggregated catch and effort data for 2015 and 2016.
- Catch at size data for 2015 and 2016.
- Catch at age data for 2015 and 2016.
- Non-retained catch data for 2015 and 2016.

2 Data Sources

To compile SBT fishery data, our fishery statistics system includes several fishery data, namely paper logbook collected from fishing vessels, electronic logbook data transmitted daily by fishing vessels, SBT weekly catch reports of individual fishing vessel, catch documentation scheme (CDS) data, observer data and vessel monitoring system (VMS) data of authorized SBT fishing vessels.

2.1 Logbook data

Appendix A-1, A-2 and A-3 are the forms of the logbook, and the data fields in logbook include:

(1) General information - information of vessel identification and trip operation.
(2) Fishing effort - information on characters of fishing operations, hooks deployed per set, number of hooks deployed between float etc.
(3) Retained and non-retained catch by species in number and weight.
(4) Length and weight measurement of first 30 fish retained.

Since April 2015, all SBT authorized fishing vessels have been required to report their fishing data through electronic logbook system, and data fields of electronic logbook are as the same as paper logbook.

2.2 SBT weekly catch report

The SBT authorized fishing vessels are required to report weekly on retained catch and non-retained discard of SBT to FA for quota monitoring. The catch data, including length and weight of individual retained SBT catch, and number and weight of SBT discard, are collected daily with the operation location, which is cross checked with the operation location of logbook data and VMS data. The format of weekly report is shown as Appendix B. The data fields of weekly report include:

(1) Vessel identification.
(2) Weekly catch of target species, water temperature, average hooks deployed per set and number of hooks between float per set.
(3) Catch information on individual SBT catch retained, tag number and operation location for each set.
(4) Number and weight of SBT discards.

2.3 Catch Documentation Scheme (CDS) data

Catch certification is collected from catch monitoring document of CCSBT and traders' sales of SBT. The data fields include:

(1) Vessel identification.
(2) Information on operation date, total number and weight for whole fish of catches.
(3) Intermediate product destination section, including transshipment information or landing in intermediate port for export.
(4) Final product destination information.
(5) Traders' sales information on real weight of SBT catch delivered to buyers.

2.4 Observer data

The data fields collected by observer include:

(1) Vessel identification and trip information.
(2) Gear configuration, location information of setting and hauling, and fishing effort.
(3) Information of individual catch, including length and weight measurements, fate and gender information.

2.5 VMS data

All authorized SBT fishing vessels are required to install VMS for monitoring operations. The logbook data, weekly report data and catch documentation scheme (CDS) data collected from authorized SBT fishing vessel with cross checking against VMS data to confirm the operation location information recorded in logbook and weekly reports.

3 Data compilation

The annual catch estimate of SBT is compiled from CDS data, and the catch and effort data is compiled from logbook data. The catch-at-size data and non-retained SBT catch are compiled from the weekly report data.

3.1 Definition of fishing season

All data collected with detailed date information, the division of fishing season information is in accordance with the detailed data information of logbook data.

3.2 Spatial Definitions

All data collected with detailed latitude/longitude information, the division of fishing area is in accordance with the detailed data information of logbook data according to the CCSBT research area definition.

4 Data Validation

There are only 2 foreign ports have been designated by Taiwan for SBT landing and transhipment of its flagged vessels since March, 2010 , namely Port Louis, Mauritius and Port Cape Town, South Africa, and government officials of FA stationed at Port Louis and Port Cape Town are responsible for inspection and supervising the operations of SBT landing and transhipment. The fishing port of Cianjhen in Kaohsiung, Taiwan, has been designated for domestic landing of SBT by carrier vessels or fishing vessels. The FA has dispatched officials to supervise all of SBT catch since September, 2009. All inspection and supervision in each port would make sure the SBT catch to consistent with weekly report and CDS data. Besides, the position or catch information recorded of logbook, e-logbook, VMS data, CDS data and weekly report are cross-checked each other, then any discrepancies were confirmed with original data. In addition, observer data is included in process of cross-checking to examine the position or catch information recorded. It has not found any discrepancy among datasets on catch.

Appendix A-1

航次基本資料

GENERAL INFORMATION[1]

公司行號名稱
Company name：_____ 負責人姓名
Vessel Owner：_____

漁船名稱
Vessel name：_____

漁船噸位
Gross Register Tonnage：_____噸(Tons)

漁船統一編號
Registration number：CT□－□□□□

航次數 第 航 次
No. of trips：The_____voyage sequence

航次期間(Trip information)：

自民國_____年_____月_____日 由_____基地（港口）出海，

Departure date (Min Guo year[2], month, day) , and departure port

於_____年_____月_____日開始作業，_____年_____月_____日停止作業，

Start fishing date (Min Guo year, month, day), and stop fishing date (Min Guo year, month, day)

至民國_____年_____月_____日返回（到達）_____基地（港口），

Return date (Min Guo year, month, day), and return port

總共航行日數_____日，作業日數_____日。

Total navigating days, and total fishing days

船員人數
No. of crews：_____人
Persons

船長姓名
Captain name：_____（簽章）
(Signature)

填表人姓名
Crew name：_____（簽章）
(Signature)

[1] The origin form is only in Chinese. English translation shown in shadow is added on this document.
2. The year used in the Chinese format report is Min Guo calendar year, which is basically the year AD minus 1,911. For example, Min Guo year 98 is the same as the year 2009.

Appendix A-2

Daily fishing record（translated from Chinese）

Daily fishing record	Vessel name		Date	YY/MM/DD	Time	
	Location（at noon）	Latitude： Longitude：	Sea surface temperature		Length of branch line	
	Bait used		Length of floating line		No. of branch line (No. of hooks per basket)	

Catch detail	Weight Retained (kg)	Number Retained	Weight Discarded (kg)	Number Discarded	Catch detail	Weight Retained (kg)	Number Retained	Weight Discarded (kg)	Number Discarded
Albacore ≦10 kg					Shortbill spearfish				
Albacore >10 kg					Longbill spearfish				
Bigeye tuna ≦15kg					Other marlins				
Bigeye tuna 16-25kg					Thresher shark				
Bigeye tuna 26-40kg					White shark				
Bigeye tuna >40kg					Silk shark				
Yellowfin tuna ≦15kg					Tiger shark				
Yellowfin tuna 16-25kg					Mako Shark				
Yellowfin tuna >25kg					Porbeagle				
Southern Bluefin tuna ≦ 15kg					Crocodile shark				
Southern Bluefin tuna 16-25kg					Blue shark				
Southern Bluefin tuna 26-40kg					Hammerhead shark				
Southern Bluefin tuna >40kg					Oceanic white tip shark				
Bluefin tuna					Other shark				
Other tuna					Bonito, skipjack				
Swordfish ≦25kg					Mahi mahi				
Swordfish 26-45kg					Oil fish（castor）				
Swordfish >45kg					Oil fish（escolar）				
White marlin ≦40kg					Other fish				
White marlin >40kg					Sea turtle				
Blue marlin					Sea bird				
Black marlin					Whale and Dolphin				
Sailfish									

Appendix A-3

Record on length and weight (Unit: cm in length and kg in weight) Distance between 2 buoys:_____Meters Total hooks：_____

Species code	Length	Weight	Species code	Length	Weight	Species code	Length	Weight	Species code	Length	Weight	Species code	Length	Weight	Species code	Length	Weight

Species code (Species name)：

1. Albacore 2. Bigeye tuna 3. Yellowfin tuna 4. Bluefin tuna 5. Skipjack 6. Swordfish 7. White marlin 8. Blue marlin 9. Black marlin
10. Other marlins 11. Southern Bluefin tuna 13. Other fish 14. Other tuna 15.Sailfish 16. Shortbill spearfish 17. Longbill spearfish
51. Blue shark 52. Blackspot shark 53. Mako shark 54.Other shark 56.Hammerhead shark 58.Oceanic white tip shark 61.Thresher shark
63.White shark 64.Tiger shark 65.Porbeagle 66. Crocodile shark

Captain signature：_____

Appendix B

WEEKLY REPORT FOR SOUNTH BLUEFIN TUNA

Vessel name：　　Registration number：CT　-

Company name：　　Date for report：DD/MM/YYYY

TEL：　　Fax　：

Targeting species：□SBT　□ALB

list	Date of Capture SBT (DD/MM/YYYY)	Location of Capture SBT (latitude/longtude)	Weight (Gill and Gutted) (unit：Kg)	Lenght (Fork Length) (unit：cm)	TAG Number	
					YEAR	

Average total hooks：　　，hook:　　，Surface Temperature of sea：

Discard Number/Weight of SBT：　　/　　(Kg)。

Amount of Number/Weight for this page： /　(kg)