

Preparation of Taiwan's Southern bluefin tuna catch and effort data submission for 2018

Abstract

The Southern bluefin tuna (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 the electronic logbook (E-logbook) 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

The Overseas Fisheries Development Council (OFDC) is entrusted by the Fisheries Agency of Taiwan (FA) to compile SBT fishery collected data, 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 submitted 5 fishery data in April 2018, namely:

- Total catch data by fleet for 2016 and 2017 by quota year and by calendar year.
- Aggregated catch and effort data for 2016 and 2017.
- Catch at size data for 2016 and 2017.
- Catch at age data for 2016 and 2017.
- Non-retained catch data for 2016 and 2017.

2 Data Sources

To compile SBT fishery data, our fishery statistics system includes several fishery data, including paper logbook collected from fishing vessels, E-logbook data transmitted daily by fishing vessels, CDS data, observer data and VMS data of authorized SBT fishing vessels.

2.1 Logbook / E-Logbook data

Since April 2015, all SBT authorized fishing vessels have been required to report their fishing data through E-logbook system. The data fields of E-logbook are the same as paper logbook. In addition, due to the E-logbook system adopting comprehensively, the weekly catch reports of individual fishing vessel is not required to carry out. For the catch monitoring, master of vessel must report catch data through E-logbook system to the FA since 2016, such as the length, weight and tag number of individual catch retained. Appendix A-1, A-2 and A-3 are the forms of the E-logbook, and the data fields in E-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.
- (5) SBT Catch information related length, weight and tag number of individual catch retained.

2.2 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.

2.3 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.

2.4 VMS data

All authorized SBT fishing vessels are required to install VMS for monitoring

operations. The E-logbook data and CDS data collected from authorized SBT fishing vessel with cross checking against VMS data to confirm the operation location information recorded in E-logbook data.

3 Data compilation

The annual catch estimate of SBT is compiled from CDS data and E-logbook data, which including the catch and effort data, the catch-at-size data and non-retained SBT catch.

3.1 Definition of fishing season

The division of fishing season for Taiwanese SBT fishery is based on the date of operating information that is collected from the E-logbook data.

3.2 Spatial Definitions

The spatial division of fishing area is in accordance with the CCSBT statistical area definition. Besides, the location of operating information is collected from the E-logbook data with cross checking against VMS data.

4 Data Validation

There are only 2 foreign ports designated by Taiwan for SBT landing and transshipment of its flagged vessels since March, 2010, namely Port Louis, Mauritius and Port of Cape Town, South Africa. The government officials of the FA stationed at these ports are responsible for inspection and supervising the operations of SBT landing and transshipment. The Chienchen Fishing Port 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 E-logbook data and CDS data. Besides, the position or catch information recorded on E-logbook data, VMS data and CDS data are cross-checked each other, and then any discrepancies would be confirmed with original data. In addition, the 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-2

Record on length and weight (Unit: cm in length and kg in weight) Type of Weight Measurement: Estimating Onboard Weighing Onboard Ocular Estimation

Species code	Length	Weight															

Captain signature : _____ Observer signature: _____

Species code (Species name) :

1. Albacore 2. Bigeye tuna 3. Yellowfin tuna 4. Bluefin tuna 5. Skipjack 6. Swordfish 7. Striped 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 19. White marlin 21. Oil fish 22. Mahi Mahi 51. Blue shark 52. Silky shark 53. Shortfin mako shark 54. Other shark 55. Longfin mako shark 58. Oceanic white tip shark 59. Bigeye thresher shark 60. Pelagic thresher shark 61. Thresher shark 62. Whale shark 63. Great white shark 64. Tiger shark 65. Porbeagle shark 66. Crocodile shark 67. Winghead hammerhead shark 68. Scalloped hammerhead shark 69. Great hammerhead shark 70. Smooth hammerhead shark

