
MEMORANDUM OF UNDERSTANDING BETWEEN THE INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC) AND FISHERIES RESOURCES INSTITUTE OF JAPAN ON PROVISION OF LONGLINE AGGREGATED LOGBOOK AND SIZE DATA TO COLLABORATIVE WORK REGARDING TO LONGLINE CATCH RATE STANDARDIZATION, IATTC PROJECT H.1.d.

The Inter-American Tropical Tuna Commission (IATTC) and Fisheries Resources Institute (FRI) of Japan Fisheries Research and Education Agency (FRA), hereafter referred to as the Parties, desirous to further their collaboration in conformity with their respective mandates and objectives, have agreed the terms of this Memorandum of Understanding to conduct collaborative work on longline catch rate analyses using logbook and size frequency data, as follows:

Background

The objective of the IATTC PROJECT H.1.d: Improve indices of abundance based on longline CPUE data is to improve the catch rate analysis for tropical tuna species (bigeye tuna and yellowfin tuna) in the eastern Pacific Ocean. This project was endorsed at the 93rd Meeting of the IATTC. The IATTC Secretariat and FRI, have mutually confirmed to conduct collaborative work on longline catch rate analyses using logbook and size frequency data, as described below. The 2021 Staff Activities and Research Plan (SAC-12-01) updates the IATTC Projects H.1.d, H.1.a (Improve the bigeye tuna stock assessment), H.1.b (Improve the yellowfin tuna stock assessment), H.1.c: (Investigate potential changes in the selectivity of the longline fleet resulting from changes in gear configuration) and H.1.e: (Construct indices of abundance and composition data for longline fleets). For all those projects the collaboration between the IATTC and FRI is central.

Purpose

The collaborative work is one research component under the umbrella of the IATTC Projects listed above, and the purpose of the collaborative work is to apply and compare many kinds of CPUE standardization methodologies to longline data in order to discuss the appropriate catch rate standardization process for the tropical tuna species to support IATTC-mandated stock assessments. Examples of standardization methodologies that will be considered include GLMs and GAMMs, and cutting-edge vector-autoregressive spatio-temporal (VAST) models, including size-specific catch rate standardization using finer resolution Japanese longline fishery data for the Pacific Ocean. In addition, analyses may be carried out to detect spatial structure of the bigeye and yellowfin tuna stock as well as exploratory fitting of models to length frequency data by sex to improve the estimates of growth, natural mortality and selectivity of the longline fleet in order to produce better stock assessments of bigeye and yellowfin tuna.

Agreement

The Parties have agreed on usage for the longline logbook and size frequency data stored in FRI, for the Pacific Ocean, only for the purpose mentioned in the item 4 below.

The following procedures and conditions shall be followed in the implementation of this work:

1. This MOU shall enter into force on the date of the second signature and shall remain in effect until the end of 14th Scientific Advisory Committee meeting, IATTC.



2. The formats of the aggregated longline logbook and size frequency data to be prepared for this collaborative work should be appropriate to investigate the catch-rate and length-frequency analyses of tropical tuna species. The Parties will share these data immediately after this MOU comes into effect.

Logbook data.

Aggregated catch and effort data, unraised, for the Pacific Ocean for all years including the following information.

- a. Catch year
- b. Catch month
- c. Size of vessel (where available)
- d. Hooks between floats (where available)
- e. Position (latitude, longitude) at a 1-degree resolution
- f. Number of hooks
- g. Catch, in number, of bigeye, yellowfin, albacore, southern bluefin tuna, swordfish, striped marlin, blue marlin, black marlin, sailfish (where available) and shortbill spearfish (where available) (zero-catch cells that had a positive number of hooks will also be included)
- h. Vessel identifier (where available)

Note: The data extends beyond the IATTC management area of the eastern Pacific Ocean (west of 150 W). The data for activity that took place outside of the IATTC management area in the eastern Pacific Ocean will be used for assessing the impact of nearby catch and effort on the CPUE standardization process and for addressing hypotheses that could improve the assessments of yellowfin tuna and bigeye tuna in the EPO (e.g. spatial analyses). Data of species other than bigeye and yellowfin will be used for support analyses, such as cluster analyses, to define fishery targeting indicators.

Size data

Aggregated size frequency data, for the Pacific Ocean for all years including the following information.

- a. Catch year
- b. Catch month
- c. Spatial resolution (1x1, 5x5, 10x20 etc.)
- d. Position (latitude and longitude)
- e. Size unit (length (cm) or weight (kg))
- f. Vessel type (commercial vessel or training vessel)
- g. Size
- h. Sex (where available)
- i. Species (bigeye and yellowfin)

Note: If the spatial resolution of raw size data is larger than the 1-degree grid, the spatial resolution of the raw data is provided instead of providing estimated size composition at a 1-degree resolution.

3. The participants in the collaborative work are listed below. In the event of staff changes, these shall be notified in writing to the Parties.

FRI:

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4. For the purpose of collaboration on tropical tuna CPUE standardization research, the attendees can use the data only under the following conditions and confidentiality arrangements:
 - The usage of the data is strictly limited to the purpose and period of this collaborating work;
 - The data is allowed to be accessed only by participants listed above in item 3;
 - The data shall be held in one PC of each participant listed above in item 3, and any copy of the data from those PCs is not permitted (except that of the Japan side participant's own original data file);
 - The IATTC staff shall not disseminate the data or uploaded it to any internet website or email address;
 - After the end of collaborative work period indicated above in item 1, all data (except the Japan side participant's own original data file) and intermediate work files which can reconstruct the original data should be completely deleted;
 - Any document or presentation derived from the result of this collaborative work should be released only with the mutual approval of the IATTC and the FRI and/or Fisheries Agency of Japan.
5. Any report or presentation that documents the results of this collaborative work shall be shared among Parties prior to release, allowing reasonable time for comments.
6. Copies of the procedures shall be provided to
Hiroshi Minami (Fisheries Resources Institute)
Hirohide Matsushima (Fisheries Agency of Japan)
Alexandre Aires-da-Silva (Inter-American Tropical Tuna Commission)

Signature

Director-General, Fisheries Resources Institute, Japan Fisheries Research and Education Agency
Kengo Tanaka



(DD/MM/YYYY: 28 / 01 / 2022)

Director *ad interim* – Inter-American Tropical Tuna Commission
Jean-François Pulvenis



(DD/MM/YYYY: 14 / 02 / 2022)