

# INTER-AMERICAN TROPICAL TUNA COMMISSION

## 102<sup>ND</sup> MEETING

Panama City, Panama  
2-6 September 2024

### PROPOSAL IATTC-102 A-4

### SUBMITTED BY THE UNITED STATES

#### RESOLUTION C-~~21~~24-~~04~~XX

#### CONSERVATION MEASURES FOR TROPICAL TUNAS IN THE EASTERN PACIFIC OCEAN DURING ~~2022~~2025-~~2024~~2027

The Inter-American Tropical Tuna Commission (IATTC), gathered in Panama City, Panama, on the occasion of its 102nd Annual Meeting; ~~by videoconference, on the occasion of its 98<sup>th</sup> Meeting (resumed);~~

Aware of its responsibility for the scientific study of the tunas and tuna-like species in its Convention Area and for formulating recommendations to its Members and Cooperating Non-Members (CPCs) with regard to these resources;

Recognizing that the potential production from the resource can be reduced if fishing mortality (F) is above maximum sustainable yield (MSY) ~~effort is excessive~~;

Concerned that the capacity of the purse-seine fleets fishing for tunas in the Convention Area continues to increase;

Taking into account the best scientific information available, reflected in the IATTC staff's recommendations, and the precautionary approach; and

Recalling the need to take into account the special circumstances and requirements of the developing countries of the region, particularly the coastal countries, as recognized in the Antigua Convention, in particular in its Preamble and its Article XXIII, paragraph 1;

Further Recognizing that Resolutions C-23-04 and C-23-05 requires non-entangling and biodegradable materials for fish aggregating devices (FADs) and Resolution C-23-03 encourages initiation of recovery programs;

Agrees:

To apply in the Convention Area the conservation and management measures for tropical tuna set out below, and to request that the staff of the IATTC monitor the fishing activities of the respective CPCs' flag vessels relative to this commitment, and also report on such activities at each annual meeting of the Commission;

1. These measures are applicable from 00:00 hours on 1 January ~~2022~~2025 to 24:00 hours on 31 December ~~2024~~2027, except for the second closure period referred to in paragraph ~~3~~4, which extends until 24:00 hours on 19 January ~~2025~~2028, and except for the additional days of closure that would be added pursuant to paragraph 5 to that second closure period. These measures are applicable to all CPCs' purse-seine vessels of IATTC capacity classes 4 to 6 (more than 182 metric tons carrying capacity), and to all their longline vessels over 24 meters length overall, that fish for yellowfin, bigeye and skipjack tunas in the Convention Area.
2. If the IATTC scientific staff stock assessment or stock status indicators for yellowfin tuna shows that Fmsy (or proxy) has been breached, the provisions of this Resolution shall be re-examined at the upcoming IATTC annual meeting and additional measures for yellowfin tuna shall be adopted by the Commission to reduce F to Fmsy.
3. Pole-and-line, troll, and sportfishing vessels, and purse-seine vessels of IATTC capacity classes 1-3 (182 metric tons carrying capacity or less) and longline vessels less than 24 meters length

overall, are not subject to these measures, except those related to the management of ~~Fish Aggregating Devices (FADs)~~.

### MEASURES FOR PURSE-SEINE FLEETS

4. All purse-seine vessels covered by these measures must stop fishing in the Convention Area for a period of 72 days in each year covered by this Resolution. These closures shall be observed in one of two periods, as follows: from 00:00 hours on 29 July to 24:00 hours on 8 October, or from 00:00 hours on 9 November to 24:00 hours on 19 January of the following year.

~~For 2022, CPCs shall ensure that purse-seine vessels flying their flags that fished during any of the years 2017, 2018 and 2019 and have caught on average more than 1,200 metric tons of bigeye tuna in floating object or unassociated sets during that period, shall, in addition to the closure stipulated in paragraph 3 of this Resolution, observe an extended closure of 8 additional days as indicated in this paragraph.~~

~~In the case of vessels that have only fished for two years during the period indicated, the average based on those two years shall be used, and in the case that a vessel fished only one year during the period indicated, only the catch data for that year shall be assumed as information for the application of this measure.~~

~~The IATTC Secretariat shall send to the CPCs by 15 December 2021, the names of the vessels that must apply the additional 8-day closure, for its pertinent application starting in 2022.~~

~~The additional days of closure pursuant to this paragraph shall be added, as appropriate, to the beginning of the closure for vessels observing the first period and to the end of the closure for vessels observing the second period, so that the closure of the first period shall always end on October 8 and the second period shall always begin on 9 November of each year.~~

5. CPCs shall ensure that purse seine vessels flying their flags that exceeded during the previous year the annual catch limit of 1,200 metric tons of bigeye tuna shall increase during the following year by 10 additional days the closure period established in paragraph ~~3~~4 of this resolution.

If during this same period a vessel exceeds the annual catch limit of 1,500 metric tons of bigeye tuna, they shall increase the closure by 13 days; if it exceeds the annual catch limit of 1,800 tons of bigeye tuna, it shall increase its closure by 16 days; if it exceeds the annual catch limit of 2,100 metric tons, it shall increase its closure by 19 days; and if it exceeds the annual catch limit of 2,400 metric tons, it shall increase its closure by 22 days, in addition to the closure stipulated in paragraph ~~3~~4 of this resolution.

The additional days of closure pursuant to this paragraph shall be added, as appropriate, to the beginning of the closure for vessels observing the first period and to the end of the closure for vessels observing the second period, so that the closure of the first period shall always end on 8 October and the second period shall always begin on 9 November of each year.

The IATTC Secretariat shall send to the CPCs by 1 March ~~2023 and 2024~~each year the names of the vessels that must observe additional closure days in accordance with this paragraph.

~~In 2023 and 2024, any vessel that in the previous year had to apply the extended closure indicated in paragraph 4, and in that same period had caught less than 1,200 metric tons of bigeye tuna, shall apply only the closure days indicated in paragraph 3 of this Resolution.~~

6. CPC's shall continue to strengthen the monitoring and control system for tuna catches through, among others, the utilization of on-board observer data, logbooks, port sampling and information from tuna processing facilities, to facilitate to the operators and captains the monitoring of their catches and a better compliance with the objectives of this Resolution.

CPCs shall be responsible for the compilation and submission of the final data on the annual catches of bigeye tuna made by individual vessels flying their flag during the current year and such data shall be reported to the Secretariat no later than 15 February of the following year.

In addition, further strengthening shall be ~~provided~~ maintained through the establishment and implementation of an enhanced monitoring program, ~~to be started no later than 1 January 2022, and preceded by a pilot program,~~ as coordinated by the IATTC scientific staff ~~to start by 1 June 2022,~~ consistent with the proposal made by the Secretariat in document IATTC-98-INF B. The Commission and the CPCs ~~should~~ shall ensure that all resources needed for ~~these two programs (pilot program and enhanced monitoring program)~~ the enhanced monitoring program will be made available in a timely manner to support the programs needed for this Resolution. ~~The resources for the pilot program should be made available no later than March 2022. At its annual meeting in 2022 the Commission should approve a budgetary funding mechanism for the enhanced monitoring program.~~

~~For 2023 and 2024, as~~ As soon as possible, after the conclusion of each trip, the IATTC staff will transmit to the flag CPC their best estimate of a vessel's catch for that trip, together with an accounting of the data and the methodology used to arrive at the estimate. The flag CPC will then determine the amount of bigeye catch that will be attributed to a vessel for a given trip per paragraph 9.

7. The sampling in port and processing plants may prioritize vessels that have reached an average catch between the years 2017 to 2019 greater than five hundred (500) tons of bigeye tuna per year, according to the data received by the Secretariat.
8. CPCs shall ensure that the processing plants data for vessels flying their flags for any fish caught in the IATTC Convention Area be provided to its fisheries authorities in real time (i.e., within 10 days from the first day of unloading until the last day of grading by size), with copy to the IATTC staff.
9. The CPCs will be responsible for estimating the catch of bigeye tuna of each vessel flying its flag at the end of each trip, to the extent that one or more data sources are available to the CPC in the days immediately after the conclusion of the trip and discharge (e.g., observer estimates, ship's log data, well sampling, cannery data). The duty to estimate the catch of the vessel will be the responsibility of the flag CPC.
10. In the event that the *status quo* conditions, as represented by the average annual catches of bigeye tuna during the three-year period 2017-2019 (66,906 t – Best Scientific Estimate [BSE]), are not offset by this measure, or taking into consideration the results of any new stock assessments for bigeye, the IATTC scientific staff shall propose to the Commission an update of its recommendations for these conservation measures, including, among others, an increase of the numbers of closure days.
11. If the implementation of this measure has positive effects that demonstrate an improvement of the status of the bigeye tuna stock, the scientific staff shall analyze the conservation measures in force in order to submit to the Commission for consideration new measures that consider, among others, reducing the number of closure days or eliminating the “*corralito*.”
12. The fishery for yellowfin, bigeye, and skipjack tuna by purse-seine vessels within the area of 96° and 110°W and between 4°N and 3°S, known as the “*corralito*”, which is illustrated in Figure 1, shall be closed from 00:00 hours on 9 October to 24:00 hours on 8 November.

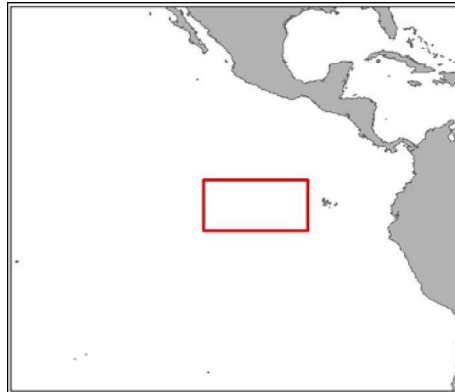


Figure 1. Closure area

13.
  - a. For each one of the closure periods stipulated in paragraph ~~3~~4 of this Resolution, each CPC shall notify the Director, by ~~1 June~~15 July of each year, the names of all the purse-seine vessels that will observe that closure period, also identifying those that must observe additional closure days pursuant to paragraphs ~~4 and~~ 5 of this resolution. For those vessels that must observe additional closure days pursuant to paragraph 5 of this Resolution, each CPC shall notify the Director by 15 June of each year.
  - b. Every vessel that fishes, regardless of the flag under which it operates or whether it changes flag or the jurisdiction of the CPC under which it fishes during the year, must observe the closure period to which it was committed.
14. a. If a *force majeure*<sup>1</sup> event renders a vessel<sup>2</sup> unable to proceed to sea outside one of the two closure periods during a period of at least 75 continuous days, a CPC may request an exemption for a reduced closure period as provided in paragraph ~~3~~4 and subparagraph 13b. If an exemption is granted, the vessel will be required to observe a reduced closure period as outlined below in subparagraph 14e. A request for exemption due to *force majeure* shall be sent by a CPC to the Secretariat within 30 calendar days of the end of the period of inactivity due to *force majeure*. Requests submitted after this time will not be considered.
  - b. In addition to the request for an exemption, the CPC shall send the evidence necessary to demonstrate that the vessel did not proceed to sea during said continuous period, which closure period the vessel observed, and that the facts on which the request for exemption is based were due to *force majeure*.
  - c. After the timely receipt of both the request and supporting information required in subparagraph b, the Director shall immediately send the request and the evidence electronically to the other CPCs for their consideration, duly coded in order to maintain the anonymity of the name, flag and owner of the vessel.
  - d. The request shall be considered accepted unless an IATTC Member objects to it formally within 15 calendar days of the receipt of said request, in which case the Director shall immediately notify all CPCs of the objection.
  - e. If the request for exemption is accepted:
    - i. the vessel shall observe a reduced closure period of 40 consecutive days in the same year during which the *force majeure* event occurred, in one of the two periods prescribed in paragraph ~~3~~4, to be immediately notified to the Director by the CPC, or

<sup>1</sup> For the purposes of paragraph 14, only cases of vessels disabled in the course of fishing operations by mechanical and/or structural failure, fire or explosion, shall be considered *force majeure*.

<sup>2</sup> This exemption applies to the vessels of fleets that observe either of the closure periods prescribed in paragraph ~~3~~4.

- ii. in the event said vessel has already observed a closure period prescribed in paragraph ~~3~~ **4** in the same year during which the *force majeure* event occurred, it shall observe a reduced closure period of 40 consecutive days the following year, in one of the two periods prescribed in paragraph 3, to be notified to the Director by the CPC no later than ~~June~~ **15 July** of that year.
  - iii. vessels that benefit from the exemption must carry an observer aboard authorized pursuant to the AIDCP.
  - iv. The exemption shall only apply to the 72-day closure period stipulated in paragraph ~~3~~ **4** of this Resolution, not to the additional periods stipulated in paragraphs ~~4 and 5~~.
15. Each CPC shall, for purse-seine fisheries:
- a. Before the date of entry into force of the closure, take the legal and administrative measures necessary to implement the closure;
  - b. Inform all interested parties in its tuna industry of the closure;
  - c. Inform the Director that these steps have been taken;
  - d. Ensure that at the time a closure period begins, and for the entire duration of that period, all the purse-seine vessels fishing for yellowfin, bigeye, and/or skipjack tunas that are committed to observing that closure period and that fly its flag, or operate under its jurisdiction, in the Antigua Convention Area are in port, except that vessels carrying an observer authorized pursuant to the AIDCP may remain at sea, provided they do not fish in the Convention Area. The only other exception to this provision shall be that vessels carrying an observer authorized pursuant to the AIDCP may leave port during the closure, provided they do not fish in the Convention Area.

#### **MEASURES FOR THE FISHERY ON FISH-AGGREGATING DEVICES**

16. For the purposes of this Resolution, the definitions contained in Annex I shall apply.
17. CPCs shall ensure that purse-seine vessels flying their flag have no more than the following number of FADs, as defined in Annex I (consistent with Resolution C-19-01), active at any one time. CPCs shall ensure that the design and construction of any FAD to be deployed or redeployed (i.e., placed in the water) shall comply with the non-entangling requirements in Annex II of Resolution C-23-05 and paragraph 2 in Resolution C-23-04 for 2025 and the biodegradable requirements in paragraph 3 in Resolution C-23-04 for 2026 and beyond.

For ~~2024~~2025-2027: \_\_\_\_\_

Class 6 (1,200 m <sup>3</sup> and greater):	340 FADs
Class 6 (< 1,200 m <sup>3</sup> ):	210 FADs
Class 4-5:	85 FADs
Class 1-3:	50 FADs

18. A FAD shall be activated exclusively onboard a purse-seine vessel.
19. For the purposes of this resolution, a FAD is considered active when it:
- a. is deployed at sea; and
  - b. activation of the satellite buoy has occurred, and the satellite buoy is transmitting its location and is being tracked by the vessel, its owner, or operator.

20. Deactivations of a satellite buoy.

- a. Deactivation of a satellite buoy attached to a FAD may only be done in the following circumstances: complete loss of signal reception; ~~beaching~~; appropriation of a FAD by a third party; temporarily during a selected closure period; for being outside of:
  - the area between the meridians 150° W and 100° W, and the parallels 8° N and ~~10~~**25**°S;
  - the area between the meridian 100° W and the coast of the American continent and the parallels 5° N and 15°S;

or transfer of ownership. CPCs shall report, or require their vessels to report, deactivations to the Secretariat using the specific data fields indicated in Annex II. The reports shall be

submitted at monthly intervals with a time delay of at least 60 days, but no longer than 90 days after the deactivation. The FAD Working Group, based on advice from the IATTC scientific staff, shall provide to the SAC and the Commission advice on any required adjustments.

b. For an exemption from FAD limits south of 10° S. in paragraph 17, CPCs shall require vessel owners and operators flying their flag to share location data for satellite buoys on FADs that drift south of 10° S. with FAD recovery programs or other vessels capable of retrieving FADs as identified in Resolution C-23-03. CPCs shall report, or require their vessels to report, any active buoy location data sharing to the Secretariat using the specific data fields indicated in Annex V.

~~20~~21. Remote reactivation of a satellite buoy at sea shall only occur in the following circumstances: to assist in the recovery of a beached FAD; after a temporary deactivation during the closure period; or transfer of ownership while the FAD is at sea. CPCs shall report, or require their vessels to report, any remote reactivation to the Secretariat using the specific data fields indicated in Annex

III. The reports shall be submitted at monthly intervals with a time delay of at least 60 days, but no longer than 90 days after the remote reactivation.

~~21~~22. The *Ad Hoc* Working Group on FADs shall recommend to the SAC for its consideration at its meeting in ~~2022~~2025 at the latest, advice to further mitigate stranding events and activation/deactivation data to develop future options for at-sea recovery of FADs. This analysis should evaluate options including the optimal tail length for FADs to reduce damage from strandings. ~~develop the use of biodegradable materials in FADs, including a definition and criteria for biodegradable FADs, or FADs with designs and materials that pose less risk to the environment.~~

~~22~~23. The IATTC scientific staff and the Working Group on FADs will also, to the extent possible, review the variation in levels of aggregation, mortality, change in fishing strategy, and durability of FADs built with biodegradable materials or with designs and materials that present less risk for the environment. These results will also be presented at the ~~12<sup>th</sup>~~16<sup>th</sup> meeting of the Scientific Advisory Committee and the ~~99<sup>th</sup>~~103<sup>rd</sup> meeting of the Commission to determine adjustments to the active FAD limits for vessels switching to biodegradable FADs.

24. In order to support the work of the IATTC scientific staff in analyzing the impact of FAD fisheries, while protecting business confidential data, CPCs shall report, or require their vessels to report, daily information on all active FADs to the Secretariat. The information provided shall be identical in form and content to the raw satellite buoy data provided by the buoy manufacturers to the original users (i.e., vessels and vessel administrators), as specified in the Annex IV of this Resolution. Reporting shall occur at monthly intervals and with a time delay of at least 60 days, but no longer than 90 days. ~~The IATTC scientific staff and Working Group on FADs shall recommend to the Scientific Advisory Committee and the Commission for consideration at its 2022 meeting, a protocol for the use by third parties of the data provided pursuant to this paragraph, in protection of the confidentiality of the data.~~

~~23~~25. CPCs shall require fishing companies and buoy providers under their jurisdiction, to make submit to the IATTC, all available historical acoustic buoy information to avoid losing data received by original users, including both trajectories and biomass information, which the IATTC scientific staff has stated provides an enormous value for science, and in particular stock assessments. The information provided shall be identical in form and content to the raw satellite buoy data provided by the buoy manufacturers to the original users (i.e., vessels and vessel administrators), as specified in the Annex IV of this Resolution. These data shall be submitted to the Director, by 1 January, 2026.

~~24~~26. In order to provide the IATTC scientific staff with valuable information to feed their work, starting in 2023 CPCs shall report, or require their vessels to report to the IATTC, utilizing a format to be developed by the IATTC staff and approved by the Commission, complete VMS data for all vessels required to carry VMS pursuant to Resolution C-14-02. The information reported to the Secretariat shall include, at a minimum, the information specified in Paragraphs 2(a) of and 2(b) of that Resolution. Where the flag CPC requires more frequent polling rates,



CPCs are encouraged to submit higher-frequency VMS data. Reporting shall occur every two months and with a time delay no longer than 90 days. Data collected pursuant to this paragraph shall be treated in accordance with Resolution C-15-07 on data confidentiality policy and procedures.

~~25~~27. Each CPC shall ensure that:

- a. its purse-seine vessels do not deploy FADs during a period of 15 days prior to the start of the selected closure period;
- b. all its Class-6 purse-seine vessels recover within 15 days prior to the start of the closure period a number of FADs equal to the number of FADs set upon during that same period.

~~26~~28. The Scientific Advisory Committee and the *Ad hoc* Permanent Working Group on FADs shall review the progress and results of the implementation of the FAD provisions contained in this Resolution and make recommendations to the Commission, as appropriate.

~~a. To reduce the entanglement of sharks, sea turtles or any other species, CPCs shall ensure that the design and deployment of FADs shall be based on the principles set out in paragraphs 1 and 2 of Annex II of Resolution C-19-01.~~

~~b. CPCs, with the support of the Commission and its staff and in consultation with all stakeholders, as appropriate, shall encourage the design and use of biodegradable non-entangling FADs.~~

#### MEASURES FOR THE LONGLINE FISHERY

~~27~~29. China, Japan, Korea, United States, and Chinese Taipei undertake to ensure that the total annual catches of bigeye tuna by their longline vessels in the Convention Area during ~~2022~~2025, ~~2023~~2026 and ~~2024~~2027 do not exceed 55,131 metric tons, distributed at the following levels:

Country	Metric tons
China	2,507
Japan	32,372
Korea	11,947
Chinese Taipei	7,555
United States	750

~~28~~30. All other CPCs undertake to ensure that the total annual catches of bigeye tuna by their longline vessels in the Convention Area do not exceed the greater of 500 metric tons or their respective catches of bigeye tuna in 2001<sup>3,4</sup>. CPCs whose annual catches have exceeded 500 metric tons shall provide monthly catch reports to the Director.

~~29~~31. A CPC referenced in paragraph 29 may make a single transfer of a portion of its bigeye tuna catch limit to other CPCs that also have a bigeye tuna catch limit listed in paragraph 29, provided that the total transferred by any CPC does not exceed 30 percent of its catch limit. These transfers cannot be made to retroactively cover an overage of another CPC's catch limit. Both CPCs involved in a transfer shall, separately or jointly, notify the Director 10 days in advance of the intended transfer. This notification shall specify the tonnage to be transferred. The Director shall

<sup>3</sup> The Commission acknowledges that France, as a coastal State, is developing a tuna longline fleet on behalf of its overseas territories situated in the Convention Area.

<sup>4</sup> The Commission acknowledges that Peru, as a coastal State, will develop a tuna longline fleet, which will operate in strict compliance with the rules and provisions of the IATTC and in accordance with the resolutions of the Commission.

promptly notify the Commission of the transfer.

- ~~32.~~ The CPC that receives the transfer shall be responsible for management for the transferred catch limit, including monitoring and monthly reporting of catch. A CPC that receives a one-time transfer of bigeye tuna catch limit shall not retransfer that catch limit to another CPC. The amount of bigeye transferred shall be considered without prejudice by the Commission for the purposes of establishing any future limits or allocations.
- ~~33.~~ CPCs shall provide the IATTC scientific staff with historical operational longline logbook data for target and non-target species to enable the implementation of the Scientific Plan with respect to the construction of indices of abundance and useful information for stock assessments of tropical and temperate tunas. These data shall be submitted to the Director no later than 1 January, 2025.
- ~~34.~~ CPCs shall provide the IATTC scientific staff operational set by set level logbook data for target and non-target species from the longline fleet, or at a minimum, data aggregated at a 1 by 1 degree spatial resolution by vessel, month, and hooks per basket/hooks between float lines. CPCs shall provide these data to the Director annually on April 30th.

### OTHER PROVISIONS

- ~~35.~~ Landings and transshipments of tuna or tuna products that have been positively identified as originating from fishing activities that contravene these measures are prohibited. The Director is requested to provide relevant information to CPCs to assist them in this regard.
- ~~36.~~ Each CPC shall submit to the Director, by 15 July, a national report on its updated national compliance scheme and actions taken to implement these measures, including any controls it has imposed on its fleets and any monitoring, control, and compliance measures it has established to ensure compliance with such controls.
- ~~37.~~ In order to evaluate progress towards the objectives of these measures, the IATTC scientific staff will analyze the effects on the stocks of the implementation of these measures, and previous conservation and management measures, and will propose, if necessary, appropriate measures to be applied in future years.
- ~~38.~~ Subject to the availability of the necessary funding, the Director is requested to continue the experiments with sorting grids for juvenile tunas and other species of non-target fish in the purse-seine nets of vessels that fish on FADs and on unassociated schools, by developing an experimental protocol, including parameters for the materials to be used for the sorting grids, and the methods for their construction, installation, and deployment. The Director shall also specify the methods and format for the collection of scientific data to be used for analysis of the performance of the sorting grids. The foregoing is without prejudice to each CPC carrying out its own experimental programs with sorting grids and presenting its results to the Director.
- ~~39.~~ To renew the requirement for all purse-seine vessels to first retain on board and then land all bigeye, skipjack, and yellowfin tuna caught, except fish considered unfit for human consumption for reasons other than size. A single exception shall be the final set of a trip, when there may be insufficient well space remaining to accommodate all the tuna caught in that set.
- ~~40.~~ The IATTC shall continue efforts to promote compatibility between the conservation and management measures adopted by the IATTC and Western and Central Pacific Fisheries Commission (WCPFC) in their goals and effectiveness, especially in the overlap area, including by frequent consultations with the WCPFC, in order to maintain, and inform their respective members of, a thorough understanding of conservation and management measures directed at bigeye, yellowfin, and other tunas, and the scientific bases and effectiveness of those measures. The Commission encourages CPCs and IATTC Staff to participate in WCPFC Science Management Dialogues.
- ~~41.~~ The IATTC shall prioritize further research on the stock structure of EPO yellowfin tuna necessary for the development of a benchmark stock assessment and eventual Management Strategy Evaluation (MSE) that can examine spatial issues such as the impact of high catches of juvenile yellowfin in the southern floating object fishery.
- ~~42.~~ The IATTC shall support the development of management strategies for tropical tunas in the EPO and shall consider a management procedure for bigeye tuna, including reference points, based on



the Management Strategy Evaluation (MSE) results expected in 2025. The Commission shall hold two workshops prior to the 2025 meeting of the Scientific Advisory Committee (SAC) for tropical tuna management strategy evaluation to provide opportunities for IATTC members to engage in focused conversation toward adoption of a harvest strategy for bigeye tuna.

~~36.~~43. The IATTC shall support the enhancement of the Regional Tuna Tagging Program (RTTP) with wide spatial coverage to allow for estimation of growth, natural mortality and abundance; and while maintaining a priority for tropical tunas, also include swordfish and sharks to the extent practicable (see proposal E.4.b in SAC-15 INF-E.b). In addition, the RTTP shall collaborate and coordinate with opportunistic tagging programs conducted by CPCs and relevant stakeholders.

~~Review, during the year 2022, the weighting process and risk analysis implemented for bigeye tuna and yellowfin tuna (see documents SAC 11 INF F, SAC 11 INF J, SAC 11-06, and SAC 11-07) with emphasis on the impact on the management advice, taking care that this activity does not impact the research plan of the scientific staff as described in document SAC 12-01.~~

~~Assess, in 2023, the status of bigeye tuna through updated assessments (as defined in document IATTC 98 INF B), taking care that this activity does not impact the research plan of the scientific staff as described in document SAC 12-01.~~

~~The IATTC Secretariat shall conduct, for presentation at the 2022 SAC meeting, an interim stock assessment for skipjack tuna using currently available fisheries and biological data (as proposed in IATTC 98 INF F), which may be replaced or enhanced with the results of the benchmark assessment envisaged under the work plan described in document SAC 12-01.~~

~~Subject to the availability of the necessary funding, the IATTC scientific staff shall initiate, starting in 2022, research work on the relationship between the depth of nets deployed by tuna vessels and the catches of bigeye tuna, in order to determine its effect on an increase in fishing mortality in each area of operation. For the 2023 meeting of the IATTC SAC, the results of this work should be presented for their respective analysis and recommendations to the Commission.~~

~~42. In 2022, 2023, and 2024 the results of these measures shall be evaluated in the context of the results of the stock assessments and of changes in the level of active capacity in the purse seine fleet and, depending on the conclusions reached by the IATTC scientific staff, in consultation with the Scientific Advisory Committee, and based on such evaluation, the Commission shall take further actions including substantial extension of closure days for purse seine vessels or equivalent measures, such as catch limits.~~

~~The IATTC shall continue efforts to develop harvest strategies for tropical tunas. The IATTC scientific staff shall continue to establish the scientific basis, through Management Strategy Evaluation testing, to advise the Commission on initial candidate harvest strategies, starting with bigeye tuna. The staff, consulting with the SAC, shall then present for the Commission's consideration in 2024 a candidate harvest strategy for bigeye tuna, including candidate management actions to be taken under various stock conditions.~~

~~37.~~44. Except in cases of *force majeure* prescribed in paragraph 14, no exemptions will be allowed with regard to the closure periods notified to the Director in accordance with paragraph 13a, nor with regard to the fishing effort of the purse-seine fleets of the respective CPCs.

## **Annex I**

### **Definitions**

For the purposes of this Resolution, the following definitions shall apply:

- a. FAD (consistent with Resolution C-19-01): Anchored, drifting, floating or submerged objects deployed and/or tracked by vessels, including through the use of radio and/or satellite buoys, for the purpose of aggregating target tuna species for purse-seine fishing operations.
- b. Satellite buoy: A buoy that uses a satellite network service to indicate its geographical position and is compliant with requirements in Resolution C-19-01 to be clearly marked with a unique identification code.
- c. Activation of a satellite buoy: The act of initializing network service for receiving the satellite buoy's position. Activation is done by the buoy supplier company at the request of the vessel owner or manager. Following activation, the vessel owner pays for the communication service. The buoy can be transmitting or not, depending if it has been switched on.
- d. Deactivation of a satellite buoy: The act of cancelling network service for receiving the satellite buoy's position. Deactivation is done by the buoy supplier company at the request of the vessel owner or manager. Following deactivation, the communication service is no longer paid for, and the buoy stops transmitting.
- e. Reactivation of a satellite buoy: The act of re-initializing network service for transmission of a satellite buoy's position after deactivation. The procedure is the same as the one to be followed for activation of a satellite buoy.
- f. Signal loss: The situation in which, without any intervention of the owner/operator/manager, a satellite buoy cannot be located by the owner on a monitoring device. The main causes of signal loss are buoy retrieved by another vessel or person (at-sea or on-shore), FAD sinking and buoy failure.

## **Annex II**

CPCs shall report, or require their vessels to report, any deactivation of a satellite buoy to the Secretariat using the following data fields of the first communication of the buoy after being activated:

- date [YYYY/MM/DD],
- time [hh:mm],
- buoy identifier code,
- latitude [expressed in degrees and minutes in decimal values],
- longitude [expressed in degrees and minutes in decimal values],
- speed [knots], and
- reason of deactivation: signal loss, stolen FAD, beaching, temporarily during closure periods, transferred ownership, FAD outside the areas specified in paragraph 20 of this resolution, other (specify).

### **Annex III**

CPCs shall report, or require their vessels to report, any remote reactivation of a satellite buoy to the Secretariat using the following data fields of the last communication of the buoy before being deactivated:

- date [YYYY/MM/DD],
- time [hh:mm],
- buoy identifier code,
- latitude [expressed in degrees and minutes in decimal values],
- longitude [expressed in degrees and minutes in decimal values],
- speed [knots], and
- reason of remote reactivation: recovery of a signal loss, after a temporary deactivation during the closure period, or transfer of ownership while FAD is at sea, other (specify).

## Annex IV

### Format of the information to be requested to satellite buoy manufacturers

#### a) Daily information on buoy location

The following data fields should be included for all the buoys and positions recorded during the day, in fishing company-specific csv files:

- date [dd-mm-yyyy],
- time [hh.mm],
- unique buoy identifier code [the format varies for each buoy manufacturer but is always an alphanumeric code],
- IMO of the vessel associated to the buoy and receiving the information,
- latitude [expressed as decimal degrees],
- longitude [expressed as decimal degrees],
- speed [knots].

Additionally, whenever possible, the following information corresponding to each transmission will be included:

- Water temperature.
- Buoy in the water (only for those buoys with sensors that allow identifying buoys in the water)
- Activation and deactivation dates.
- Estate or transmission mode of the buoy (e.g. immediate information, retrieving, etc.)

Data should be received in csv files named “X-YYYY-MM-ZZZZZZZ.csv” where X is the code of the buoy manufacturer (M, S, Z, for Marine Instruments, Satlink, and Zunibal, respectively), YYYY is the year, MM the month, and ZZZZZZZ the name of the fishing company. A single csv file will be prepared for company, year and month.

#### b) Information on acoustic records

The following data fields must be included for all the buoys and acoustic records recorded daily, in fishing company-specific csv files:

- ZUNIBAL: company, unique buoy identifier code, date (date, time), type (position or sounder), latitude, longitude, speed, drift, total
- SATLINK: Company, unique buoy identifier code, Message Descriptor (MD), date (date, time), latitude, longitude, battery charge (bat), temp, speed, drift, layer1, layer2, layer3, layer4, layer5, layer6, layer7, layer8, layer9, layer10, sum, max, mag1, mag2, mag3, mag4, mag5, mag6, mag7, mag8.
- MARINE INSTRUMENTS: company, unique buoy identifier code, TransmissionDate, TransmissionHour, lat, lon, mode, light, poll, temperature, vcc, SounderDate, gain, layers, layerbits, maxdepth, sd1, sd2, sd3, sd4, sd5, sd6, sd7, sd8, sd9, sd10, sd11, sd13, sd12, sd14, sd15, sd16, sd17, sd18, sd19, sd20, sd21, sd22, sd23, sd24, sd25, sd26, sd27, sd28, sd29, sd30, sd31, sd32, sd33, sd34, sd35, sd36, sd37, sd38, sd39, sd40, sd41, sd42, sd43, sd44, sd45, sd346, sd47, sd48, sd49, sd50.

Data should be received in csv files named “X-YYYY-MM-ZZZZZZZ-Sounder.csv” where X is the code of the buoy manufacturer (M, S, Z, for Marine Instruments, Satlink, and Zunibal, respectively), YYYY is the year, MM the month, and ZZZZZZZ the name of the fishing company. A single csv file will be prepared for company, year and month.

## Annex V

CPCs shall report, or require their vessels to report, any data sharing for a satellite buoy to the Secretariat for the purpose of FAD retrieval as required in paragraph 20 using the following data fields:

- Name of FAD recovery program and/or vessel IMO the location data is shared with,
- FAD location data until the point of recovery,
- date [dd-mm-yyyy],
- time [hh.mm],
- unique buoy identifier code [the format varies for each buoy manufacturer but is always an alphanumeric code],
- IMO of the vessel associated to the buoy and receiving the information,
- latitude [expressed as decimal degrees],
- longitude [expressed as decimal degrees],
- speed [knots].