



OUTCOMES OF THE 25TH SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY: IOTC SECRETARIAT, LAST UPDATED: 13TH NOVEMBER 2023

Purpose

To inform participants at the 19th Working Party on Data Collection and Statistics (WPDCS19) of the recommendations arising from the 25th Session of the Scientific Committee (SC25) that was held online from 5 - 9 December 2022, and specifically relating to the work of the WPDCS.

Background

At the 25th Session of the SC held as a hybrid meeting, the SC noted and considered the recommendations made during the 18th Session of the WPDCS which was held between the 28th of November and 2nd of December 2022.

Based on the recommendations arising from the WPDCS18, the SC25 adopted a set of recommendations which were provided to the Commission for consideration at its 27th Session held in Seychelles in May 2023 ([Appendix A](#)). A separate paper (IOTC-2023-WPDCS19-04) addresses the responses and actions of the Commission.

In addition, the SC25 reviewed and endorsed a Program of Work for the WPDCS. A separate paper (IOTC-2022-WPDCS19-09) will outline the review and further development of a *Program of Work* for the WPDCS for the next five years.

Discussion

In addition to the recommendations outlined in [Appendix A](#), the following extracts from the SC25 Report (IOTC-2022-SC25-R) are provided here for the consideration and action of the WPDCS19.

Report of the Secretariat – Activities in support of the IOTC science process in 2022

(Para. 12) The SC **NOTED** although all meetings had been successfully held virtually in 2022, they were shortened to facilitate the virtual platform. The SC **AGREED** that in the future virtual meetings should still be conducted for certain meetings (such as Data preparatory meetings) to reduce the expenses travel imposes on CPCs as well as the IOTC MPF, but for those meetings requiring closer collaborations, in person, physical (or preferably hybrid) meetings will be continued as required.

(Para.14) The SC **NOTED** that data related activities at the Secretariat have been extensive and the capacity of the data team to complete this work needs to be increased, further **NOTING** that a new position within this team has recently been advertised and the Secretariat hopes to fill the position in 2023. The SC **NOTED** that the Secretariat would then determine if further capacity may be required.

(Para. 17) The SC **NOTED** the need to have a repository of information on data extrapolation procedures used by CPCs, further **NOTING** that while CPCs are required to submit this information in their national reports as per to paragraphs 4 and 5 of Res. 15/02, many CPCs have not provided this information.

National Reporting to the Scientific Committee: overview

(Para. 24) The SC **RECALLED** that the submission of a National Report is mandatory, irrespective of whether a CPC intends on attending the annual meeting of the SC or not and shall be submitted no later than 15 days prior to the SC meeting. In 2022, of the 26 National Reports submitted, 2 were submitted shortly after the deadline. The SC **NOTED** that the National Report does not replace the need for submission of data

according to the IOTC Mandatory Data Requirements listed in the relevant IOTC Resolution (currently Resolution 15/02 On mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)).

(Para. 24) The SC **NOTED** the importance of consistency and standardisation in the format of reporting on fisheries in National Reports and again **REQUESTED** that CPCs follow the reporting template agreed by the Commission. The SC **NOTED** that in 2022, very few National Reports were submitted using older reporting templates and in these cases all mandatory information as stipulated in the CMMs was still provided. The Secretariat informed the SC that the latest template will continue to be published on the IOTC webpage (<https://iotc.org/science>), the SC meeting page and distributed through official Circular as requested by the SC in 2020.

(Para. 26) In addition, the SC **NOTED** that the availability for download of the revised National Report templates from the IOTC Website was announced through IOTC Circular 2022/40 sent on the 7th of July 2022 as well as through the IOTC Science mailing list.

(Para. 28) The SC **AGREED** that if required, interested CPCs should seek assistance from the IOTC Secretariat in the development of National Reports. Requests should be made as early as possible so that the IOTC Secretariat may be able to better coordinate the resources available.

National Reporting to the Scientific Committee: Contracting Parties (Members)

(Para. 32) **NOTING** the 26 National Reports submitted to the IOTC Secretariat in 2022 by Contracting Parties (Members), the SC expressed concern about the difference between the catches submitted in some National Reports and total catches, by fleet, in the IOTC database. The IOTC Secretariat uses the information from the National Report to update estimates of nominal catches, in the case of revisions to the data or when CPCs have not submitted any catch data; however, the time available between submission of the National Reports and the Scientific Committee makes it difficult to update the IOTC nominal database prior to the annual Session. The Secretariat expressed their willingness to work with the CPCs concerned to resolve these differences and ensure all catches are consistent across the various data sources and that several CPCs had requested assistance in the past to conduct re-estimations of their historic catches.

(Para. 33) The SC **NOTED** that scientific and statistical information such as discard levels, observer coverage, fleet statistics etc., which are of particular relevance for several IOTC Resolutions (e.g. 15/02, 16/04, 17/05 etc.), is often only reported by CPCs in their national reports but not made available to the IOTC Secretariat in due time in accordance with the reporting requirements prescribed in the resolutions. For this reason, the SC **REQUESTED** all CPCs to ensure that the information presented in the respective national reports and the official submissions available to the IOTC are in agreement.

Report of the 12th Session of the Working Party on Neritic Tunas (WPNT12)

(Para. 39) The SC **NOTED** the lack of data available for this species and the effect this has on providing stock status advice. The SC **NOTED** that CKMR techniques may be a useful way of supplementing the current information and providing a clearer picture of current stock status for these species. Further discussions would be needed to determine the feasibility of this approach in this circumstance.

(Para. 41) The SC **NOTED** with concern the stock status of Longtail tuna and Narrow-barred Spanish Mackerel. The SC further **NOTED** that the stock statuses for these species have been in the red for at least the past 5 years with a high probability and are showing no sign of recovery. As such, the SC **RECOMMENDED** that the Commission take measures to reduce the catches (to at least MSY levels) of these species and develop management measures that will facilitate the recovery of these stocks.

Report of the 20th Session of the Working Party on Billfish (WPB20)

(Para. 44) The SC **REMINDED** that its previous recommendation on the inclusion of shortbill spearfish (*Tetrapturus angustirostris*) as an IOTC species has not yet been addressed by the Commission and **REQUESTED** the WPB

to collate more data on the species to support this recommendation which would require a revision of the IOTC Agreement.

(Para. 45) The SC **NOTED** that a study was carried out to look at the inclusion of marine subsurface variables on swordfish habit modeling in the Indian Ocean. The study makes use of the Species Distribution Model (SDM), which employs three-dimensional environmental data to estimate species distribution and derive subsurface parameters.

Report of the 18th Session of the Working Party on Ecosystems and Bycatch (WPEB18)

(Para. 61) The SC **NOTED** a recommendation from the WPEB to revise the list of sharks, rays and Endangered, Threatened and Protected (ETP) species included in Appendix II of Resolution 15/01 to ensure that all species under broad categories such as hammerhead sharks (*Sphyrna* spp.) are reported separately by species. The SC **NOTED** that this could help to provide an incentive to improve catches of these species which may have historically been reported aggregated.

(Para. 65) With a view to identifying mitigation measures to avoid or limit unwanted by-catches, the SC **NOTED** the need to improve the provision of data and information to describe the fishing gears and methods used by these artisanal fisheries.

(Para. 73) The SC **ACKNOWLEDGED** the proposed Cooperation Agreement between the IOSEA Marine Turtle MOU and IOTC and **NOTED** that this Agreement is based on the language used in the Agreement between IOTC and ACAP which has been accepted by the Commission. The SC **NOTED** this will facilitate better exchange of scientific information and data on sea turtles and their fishery interactions relevant to future commission discussions and decisions on this issue. The SC **RECOMMENDED** that the proposed Agreement is presented at the Commission for further consideration.

(Para. 74) The SC **NOTED** that a better technical understanding of fishing gears and methods, used in fisheries harvesting highly migratory stocks in the IOTC area, is needed to inform the WPEB recommendations. This knowledge will also assist the SC and Commission in their understanding of fishery interactions with bycatch species and to better facilitate consideration of management options to mitigate interactions for bycatch species for which that is needed. The SC suggested that particular consideration of this could be built into the work of the WPEB, through CPC contributions (fishing gears/methods descriptions for all areas and vessel types/sizes) and data summaries developed by the IOTC Secretariat.

Report of the 24th Session of the Working Party on Tropical Tunas (WPTT24)

(Para. 81) The SC **NOTED** the substantial increase of catch for Seychelles in 2021 is due to changes in data processing rather than increase of harvest.

(Para. 82) The SC **RECALLED** that WPTT21 used a spatial-temporal re-estimation approach to revise the bigeye tuna catch reported by EU, Spain in 2018 (limited to their log-associated school component). The official reported catches were, however, kept in the IOTC database, and the revised catch was incorporated in the assessment as scientific estimates. The WPDCS15 further improved the re-estimation technique, and the WPTT24(DP) has agreed to utilize it in the current assessment.

(Para. 86) The SC **NOTED** the presentation of the three updated forms for reporting FAD-related data to the Secretariat, **NOTING** that the resolution of the data is higher than in the previous form 3FA (i.e., at vessel and operational levels) to better reflect the data requirements set in Resolutions 15/02 and 19/02.

(Para. 87) The SC **NOTED** that the new 3FA forms would become available for download on the IOTC website in the forthcoming weeks and that they could be used for the 2023 data cycle, i.e., for reporting data for the statistical year 2022.

(Para. 89) The SC **AGREED** that both definitions have some merit and that each one could be used if all FAD-related data are included as part of the submissions to the Secretariat, **NOTING** however that the definition derived from the EU-funded CECOFAD project (i.e., a FAD is a floating object constructed and deployed by fishers

with the purpose to aggregate fish) makes a clear distinction between man-made rafts and natural floating objects, which is essential for some scientific analyses, e.g., to assess the contribution of FAD-fishing to marine pollution.

(Para. 90) The SC **REQUESTED** the WGFAD to discuss further the FAD definition and report to the WPEB and WPDCS in 2023.

Report of the 8th Session of the Working Party on Temperate Tunas (WPTmT08)

(Para. 107) The SC **NOTED** that the main factor influencing estimations of the stock state is the LL CPUE indices. Due to the restricted access to operational data, there have been some changes to the standardization method. Therefore, uncertainty exists on whether these modifications lead to more representative indices. It was noted that the CPUE index in the North-western fishery (LL 1) has much higher variability than the CPUE index in the South-western fishery (LL 3), which has a somewhat flatter trend than the previous index.

Report of the 18th Session of the Working Party on Data Collection and Statistics (WPDCS18)

(Para. 125) The SC **ACKNOWLEDGED** the extensive work done to improve the characterization of fisheries of relevance to the IOTC and **NOTED** how the proposed approach guarantees a better understanding of the different segments of all fisheries concerned.

(Para. 126) The SC **NOTED** the Secretariats intention to continue working with CPCs and national experts to retroactively apply the new fisheries characterization to all historical data, in order to guarantee full continuity in the time series of all relevant datasets. This issue will then be discussed again by the WPDCS in 2023.

(Para. 127) The SC **NOTED** the proposed updates to the recommended forms for the submission of fishery statistics to the IOTC and **ACKNOWLEDGED** that their adoption will further streamline and simplify the data submission process for both the CPCs and the Secretariat, and therefore significantly improve the timeliness and accuracy of the information available to IOTC scientists.

(Para. 128) Furthermore, the SC **RECALLED** that the IOTC data submission forms are recommended and that CPCs can also submit fishery data using different templates as long as the reference codes and all the mandatory data elements prescribed by the IOTC Resolutions are all included.

(Para. 129) In order to transition to a future adoption of the IOTC forms and workflow, the SC **AGREED** that the IOTC Secretariat organize workshops, webinars and any other form of training and interactive tools to support CPCs in this regard.

(Para. 130) The SC **RECOMMENDED** that the Commission **ENDORSE** the proposed improvements in the data submission process of fisheries statistics, including a) the new approach for the classification of IOTC fisheries, and b) the adoption of the new data submission forms.

(Para. 131) The SC **RECOMMENDED** that the Commission **ENDORSE** the mandatory reporting of fishing craft statistics and that this change is included in the next revision of Res. 15/02.

(Para. 132) The SC **RECOMMENDED** that, once the Commission adopts data requirements for IOTC fisheries, the Commission **DELEGATES** the adoption of data standards and submission forms to the SC to facilitate reporting by the CPCs.

(Para. 133) The SC **NOTED** that some of the paragraphs in some of the Resolutions are either unclear or inconsistent and therefore the SC **RECOMMENDED** the Commission to **ENDORSE** the following changes for inclusion in the next revision of the relevant IOTC Resolutions:

- a) that silky shark (*Carcharhinus falciformis*) be included in the list of “other” species appearing in the gillnet table in Section 2.3 of Annex II of Res. 15/01;

- b) that the terms “shall be submitted frequently” appearing in para. 4.c of Res. 15/02 be further clarified and complemented by a clearer indication of the spatial-temporal stratification of the dataset concerned;
- c) that para. 4.c of Res. 15/02 be amended with the inclusion of the request that “Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely” that already appears in both para. 4.a and 4.b of Res. 15/02;
- d) that para. 5 of Res. 15/02 be amended with the inclusion of “and all other relevant gears” in addition to purse seiners already mentioned in this paragraph;
- e) that para. 26 of Res. 19/02 be amended to also allow the use of buoy position data for scientific purposes, and to further clarify how to protect business confidentiality aspects as per para. 24 of Res. 19/02.

(Para. 134) The SC **RECOMMENDED** the Commission to **STRENGTHEN** the requirements for the monitoring of artisanal and semi-industrial fisheries to improve the collection, reporting and the quality of Neritic tunas and Billfish fisheries statistics.

(Para. 135) The SC **NOTED** the Secretariat’s proposal for a continuation of the study on the application of the matrix approach for the characterization of Indian Ocean fisheries and **REQUESTED** interested CPCs to liaise with the Secretariat to express their interest in further contributing to this study.

(Para. 136) The SC **ENDORSED** the request that Indonesia continue reassessing their official catch data in collaboration with the IOTC Secretariat, and that this process continues until fluctuations in the official catch levels reported for several species are reduced sensibly, and the discontinuities with years before and after those subject to this re-estimation exercise are minimized.

(Para. 137) The SC **ENDORSED** the revised versions of the ROS data reporting forms for longline and purse seine fisheries presented at the WPDCS for use by those fleets / CPCs that do not adopt the ROS electronic tools for the collection and management of scientific observer data.

(Para. 139) The SC **NOTED** that Indonesia’s official catches used for the calculation of catch limits according to Res. 19/01 are taken from the National Reports, as requested, and that the categorisation adopted therein for the apportioning of catches by the artisanal / industrial nature of the fisheries is currently under revision by Indonesia, with a view to better comply with the official categorisation used by the IOTC.

(Para. 142) For this reason, the SC **ACKNOWLEDGED** that I.R. Iran will provide revised historical catch series of yellowfin tuna from their industrial gillnet fishery that will eventually be used by the Secretariat to re-estimate their base annual limit in Appendix 33, Table 2 and the potential over-catches for 2020-2022 in agreement with the criteria expressed by Res. 19/01, and that therefore the values presented in this table for I.R. Iran fisheries shall be considered preliminary.

(Para. 143) The SC **ENCOURAGED** Indonesia, I.R. Iran and all CPCs bound by resolution 19/01 to re-submit their historical catches of yellowfin tuna (2014-2021) through form 1-RC-YFT, which accounts for the breakdown of said catches by vessel size category and area of operation, to improve the calculation of base catch limits and potential overcatches.

(Para. 148) The SC reviewed and **ENDORSED** a) the EM terms and definitions b) the EM Program standards, and c) the EM Data standards described in Appendices 6A, 6B and 6C (except Annex 1 and 2 to be adopted in March 15-16), respectively, and **RECOMMENDED** their adoption by the Commission.

(Para. 149) Moreover, the SC **NOTED** that Annex 1 and 2 of the EM Data Standards (Appendix 6C) are general guides that should be tailored to each fishery and could vary from fleet to fleet, those annexes (VMS and EM capabilities to collect ROS minimum requirements) will be finalised during next IOTC WGEMS (15-16 March, 2023) before IOTC Commission Consideration.

Recommendation

That the WPDCS:

- 1) **NOTE** paper IOTC–2023–WPDCS19–03 which outlined the main outcomes of the 25th Session of the Scientific Committee, specifically related to the work of the WPDCS.
- 2) **CONSIDER** how best to progress these issues at the present meeting.

Appendices

[Appendix A](#): Consolidated set of recommendations of the 25th Session of the Scientific Committee (5 - 9 December 2022) to the Commission, relevant to the Working Party on Data Collection and Statistics.

Appendix A

Consolidated set of recommendations of the 25th session of the Scientific Committee (5 – 9 December 2022) to the Commission and relevant to the Working Party on Data Collection and Statistics

*Extract of the Report of the 25th Session of the Scientific Committee
(IOTC-2022-SC25-R; Appendix 38, Pages 263-267)*

GENERAL RECOMMENDATIONS TO THE COMMISSION

REPORT OF THE 18TH SESSION OF THE WORKING PARTY ON DATA COLLECTION AND STATISTICS (WPDCS18)

Updates to the workflow for the management and submission of statistical data to the IOTC

SC25.23 (para. 130) The SC **RECOMMENDED** that the Commission **ENDORSE** the proposed improvements in the data submission process of fisheries statistics, including a) the new approach for the classification of IOTC fisheries, and b) the adoption of the new data submission forms.

SC25.24 (para. 131) The SC **RECOMMENDED** that the Commission **ENDORSE** the mandatory reporting of fishing craft statistics and that this change is included in the next revision of Res. 15/02.

SC25.25 (para. 132) The SC **RECOMMENDED** that, once the Commission adopts data requirements for IOTC fisheries, the Commission **DELEGATES** the adoption of data standards and submission forms to the SC to facilitate reporting by the CPCs.

SC25.26 (para. 133) The SC **NOTED** that some of the paragraphs in some of the Resolutions are either unclear or inconsistent and therefore the SC **RECOMMENDED** the Commission to **ENDORSE** the following changes for inclusion in the next revision of the relevant IOTC Resolutions:

- a. that silky shark (*Carcharhinus falciformis*) be included in the list of “other” species appearing in the gillnet table in Section 2.3 of Annex II of Res. 15/01;
- b. that the terms “shall be submitted frequently” appearing in para. 4.c of Res. 15/02 be further clarified and complemented by a clearer indication of the spatial-temporal stratification of the dataset concerned;
- c. that para. 4.c of Res. 15/02 be amended with the inclusion of the request that “Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely” that already appears in both para. 4.a and 4.b of Res. 15/02;
- d. that para. 5 of Res. 15/02 be amended with the inclusion of “and all other relevant gears” in addition to purse seiners already mentioned in this paragraph;
- e. that para. 26 of Res. 19/02 be amended to also allow the use of buoy position data for scientific purposes, and to further clarify how to protect business confidentiality aspects as per para. 24 of Res. 19/02.

SC25.27 (para. 134) The SC **RECOMMENDED** the Commission to **STRENGTHEN** the requirements for the monitoring of artisanal and semi-industrial fisheries to improve the collection, reporting and the quality of Neritic tunas and Billfish fisheries statistics.

Update on WGEMS02

SC25.28 (para. 148) The SC reviewed and **ENDORSED** a) the EM terms and definitions b) the EM Program standards, and c) the EM Data standards described in Appendices 6A, 6B and 6C (except Annex 1 and 2 to be adopted in March 15-16), respectively, and **RECOMMENDED** their adoption by the Commission.

SUMMARY DISCUSSION OF MATTERS COMMON TO WORKING PARTIES (CAPACITY BUILDING ACTIVITIES – STOCK ASSESSMENT COURSE; CONNECTING SCIENCE AND MANAGEMENT, ETC.)

Invited Expert(s) at the WP meetings

SC25.29 (para. 151) Given the importance of external independent review for working party meetings, the SC **RECOMMENDED** the Commission continue to allocate sufficient budget for invited scientific experts to be regularly invited to scientific working party meetings.

Meeting participation fund

SC25.30 (para. 153) The SC reiterated its **RECOMMENDATION** that the IOTC Rules of Procedure (2014), for the administration of the Meeting Participation Fund be modified so that applications are due not later than 60 days, and that the full Draft paper be submitted no later than 45 days before the start of the relevant meeting. The aim is

to allow the Selection Panel to review the full paper rather than just the abstract, and provide guidance on areas for improvement, as well as the suitability of the application to receive funding using the IOTC MPF. The earlier submission dates would also assist with visa application procedures for candidates.

IOTC species identification guides: Tuna and tuna-like species

SC25.31 (para. 154) The SC reiterated its RECOMMENDATION that the Commission allocates budget towards continuing the translation and printing of the IOTC species ID guides so that hard copies of the identification cards can continue to be printed as many CPC scientific observers, both on board and at port, need to have hard copies.

IMPLEMENTATION OF THE REGIONAL OBSERVER SCHEME

SC25.34 (para. 172) The SC RECOMMENDED that the Commission ENDORSE the mandatory reporting of geo-referenced effort data as number of sets/operations for longline and surface fisheries (according to the definitions in Res 15/02) to complement the current requirements of Res. 15/02, in order for the Secretariat to accurately and independently calculate the ROS coverage in agreement with the provisions of Res. 22/04.

PROGRAM OF WORK AND SCHEDULE OF WORKING PARTY AND SCIENTIFIC COMMITTEE MEETINGS

Consultants

SC25.35 (para. 186) Noting the highly beneficial and relevant work done by IOTC stock assessment consultants in previous years, the SC RECOMMENDED that the engagement of consultants be continued for each coming year based on the Program of Work. Consultants will be hired to supplement the skill set available within the IOTC Secretariat and CPCs.