
OUTCOMES OF THE 26TH SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY IOTC SECRETARIAT, AUGUST 2024

PURPOSE

To inform participants at the 20th Working Party on Ecosystems and Bycatch (WPEB20) of the recommendations arising from the 26th Session of the IOTC Scientific Committee (SC) held from 4-8 December 2023, specifically relating to the work of the WPEB.

BACKGROUND

At the 26th Session of the SC, the SC noted and considered the recommendations made by the WPEB in 2023 that included advising the Commission to consider extending measures to prevent the finning of sharks and the development of a proper mechanism to ensure that information regarding shark fins attached/non-attached to carcasses is collected and reported to the Secretariat through the ROS. The SC noted that the WPEB had not provided a summary of the information regarding measures to support the SC and Commission's further consideration of the issue of improved measures to prevent shark finning and so requested the WPEB to provide this information.

Other discussions related to supporting cooperation between CPCs on the development of regional plans of action for sharks and specifically a research plan for sharks with scalloped hammerhead as a priority species and prioritise funding to support such research and management activities.

Requests from WPEB in 2023 also included a request for CPCs to collect and provide information necessary to evaluate the effectiveness of mitigation measures and for the Secretariat to include shortbill spearfish in future data review reports prepared for the WPEB. The SC again requested clarification from the Commission regarding the use of artificial lights which ... and suggested that Resolution 16/07 be amended to clearly state which fleets and/or gears are bound by this Resolution to avoid future doubts.

The SC noted that although an assessment was scheduled for porbeagle shark in 2023, an Executive Summary has not yet been developed for this species and so requested the WPEB to develop this.

The SC also noted that a local assessment had been conducted for Indian Ocean humpback dolphins in India which assessed the population to be 'Vulnerable' as opposed to the 'Endangered' assessment for the global population) and the SC suggested that this be discussed during the next WPEB to determine whether a sub-population of this species should be added to the Executive Summary for cetaceans.

Based on the recommendations arising from the WPEB19, the SC26 adopted a set of recommendations, provided in **Appendix A** of this paper. The recommendations contained in **Appendix A** were provided to the Commission for consideration at its 28th Session which was held in May 2024.

In addition, the SC26 reviewed and endorsed a Program of Work for the WPEB, including a revised assessment schedule, as detailed in **Appendix B**. A separate paper (IOTC-2024-WPEB20(AS)-09) will outline the review and development process for a Program of Work for the WPEB for the next four years (2025-2029).

DISCUSSION

In addition to the recommendations outlined in **Appendix A** and **Appendix B** the following extracts from the SC26 Report (IOTC-2023-SC26-R[E]) are provided here for the consideration and action of the WPEB20:

Shark bycatch mitigation

The SC **NOTED** that papers on the fins-naturally-attached approach were discussed extensively during the WPEB meeting and this is thought to be the best practice to prevent shark finning from occurring. The SC **NOTED** that different approaches to fins-partially attached (which is thought to also be suitable) can be taken such as using wires to attach fins to the main body of the shark or using a bag to put both the body and fins into. The SC **NOTED** that fins-naturally-attached also allows for the partial cutting of fins which can then be folded over to aid with storage and to help to avoid injuries to crew while moving the sharks.

The SC **RECOMMENDED** that the Commission consider extending measures to prevent finning of sharks such as fins naturally attached including partially attached and tethered for all fisheries or similar, alternative measures (for example, fins artificially attached), providing they had been assessed and endorsed by the SC and Compliance Committee as being equally or more likely to meet the conservation benefit (of a fins naturally attached measure) and are logistically feasible from a compliance monitoring perspective. The SC **NOTED** that while such other measures may be logistically more difficult to implement and monitor for governments, they may be more practical (and beneficial to crew safety) for the fishing industry when conducting their fishing operations and storing shark catches on board.

The SC **NOTED** that while the WPEB had held discussion on the scientific need to improve measures to prevent shark finning, the WPEB has not provided a summary of this evidence to the SC. Subsequently, the SC **REQUESTED** the WPEB to provide this information to support the SC and Commission's further consideration of this issue.

The SC **NOTED** the intention of the WPEB to use the assigned Data Preparatory meeting both for data and stock assessment model preparation issues for shortfin mako which is due to be assessed in 2024, and also to hold a bycatch mitigation measure workshop with a range of experts on this topic. The SC further **NOTED** that there is unlikely to be a lot of new information and data for shortfin mako so there should be plenty of time during that meeting to look at mitigation measures. The SC **NOTED** the intention of the WPEB Chair and the Secretariat to reach out to experts both on mitigation measures and CPUE and stock assessments for this data preparatory meeting to make it as effective as possible.

The SC **NOTED** the proposal of the WPEB to hold the 2024 assessment meeting back-to-back with the WPB meeting and again following the WPB due to a workshop that WPB intends to hold before their meeting.

Data issues

The SC **NOTED** the poor status of discards data in terms of quality and availability which should be submitted by CPCs through form 1DI. The SC **NOTED** that the data on taxa such as cetaceans, turtles and seabirds reported through these forms are mostly data on occurrences rather than fully raised data. They **ENCOURAGED** CPCs to increase their reporting levels through this form. The SC **NOTED** that as a result of this issue, data on cetaceans, marine turtles and seabirds are available only through the Regional Observer Scheme and are therefore very limited. The SC **SUGGESTED** that increasing the minimum required level of observer coverage may help to improve data for these species.

The SC **NOTED** the experience of Australia which showed that having 100% EMS coverage onboard vessels has the impact of significantly improving the data reported by fishers through logbooks.

Ecoregions

The SC **NOTED** the ongoing work by the WPEB on ecoregions, further **NOTING** that no progress was made on this work in 2023 as the expert on this topic was not able to attend the WPEB meeting. The SC **NOTED** that the intention is for the ecoregions to be incorporated into future

Ecological Risk Assessment (ERA) and stock assessment work for all species including tropical tunas. The SC **NOTED** that draft ecoregions have been mapped and the idea now is to conduct a pilot study to assess the suitability of these draft regions.

Status of development and implementation of national plans of action for seabirds and sharks, and implementation of the FAO guidelines to reduce marine turtle mortality in fishing operations

The SC **NOTED** paper IOTC–2023–SC26–06 which provided the SC with the opportunity to update and comment on the current status of development and implementation of national plans of action for seabirds and sharks, and implementation of the FAO guidelines to reduce marine turtle mortality in fishing operations, by each IOTC CPC.

The SC **RECOMMENDED** that the Commission note the current status of development and implementation of National Plans of Action (NPOAs) for sharks and seabirds, and the implementation of the FAO guidelines to reduce marine turtle mortality in fishing operations, by each CPC as provided in Appendix 6, recalling that the IPOA-Seabirds and IPOA-Sharks were adopted by the FAO in 1999 and 2000, respectively, and recommended the development of NPOAs.

The SC **RECALLED** the request from WPEB15 in 2019 for the Secretariat to provide links in the NPOA portal on the IOTC website (<http://iotc.org/science/status-of-national-plans-of-action-and-fao-guidelines>) to the actual plan documents. The SC **NOTED** that work is being done to collect these documents from CPCs and thanked those who had already submitted them.

The SC **REQUESTED** that CPCs submit their NPOA to Secretariat for upload onto the NPOA portal.

The SC **NOTED** that there have been small revisions to the previous update on NPOAs in 2023 including the drafting of revisions of NPOAs by some CPCs and updates on the progress on the development of NPOAs by other CPCs.

The SC **NOTED** that Indonesia established a NPOA for sea turtles in 2022.

The SC **NOTED** that as Thailand's NPOA for seabirds is finalised but just awaiting the approval of relevant committees, the status of this should be changed from orange to yellow until final approval when it can be changed to green.

The SC **NOTED** that Kenya has finalised their NPOA for sharks and this is awaiting cabinet approval. The SC further **NOTED** that Kenya has also started to develop NPOAs for seabirds and sea turtles.

The SC **NOTED** that Seychelles has reviewed its NPOA for sharks which expired in 2020 and found that it was still valid so this has been extended. The SC further **NOTED** that the Seychelles Ministry for Environment is trying to work with BirdLife International to develop a NPOA for seabirds.

The SC **NOTED** that Bangladesh has finalised its NPOA for sharks and this is now awaiting approval from the relevant ministries. The SC further **NOTED** that Bangladesh has also put in place a new marine fisheries act which includes requirements for the live release of turtles and the mandatory use of circle hooks in hook and line fisheries.

Other matters

The SC **NOTED** that several longline fleets targeting swordfish in the IOTC area of competence are using submerged artificial lights (chemical light sticks or electrically powered lights) attached to the terminal gear for the purpose of attracting the target species and further **NOTED** that Resolution 16/07 prohibits all vessels from using artificial lights to attract fish, without specifying the type of fleet or gear subjected to the Resolution. The SC therefore **RECOMMENDED** that the Commission provides clarity on whether Resolution 16/07 applies to longline fisheries as the current wording is somewhat ambiguous. The SC also **SUGGESTED** that Resolution 16/07 could be

amended to clearly state which fleets and/or gears are bound by the Resolution to avoid future doubts.

The SC **NOTED** that although an assessment was scheduled for porbeagle shark in 2023, an Executive Summary has not yet been developed for this species. The SC therefore **REQUESTED** the WPEB to develop an Executive Summary for this species.

The SC **NOTED** that a local assessment had been conducted for Indian Ocean humpback dolphins in India which assessed the population to be 'Vulnerable' (as opposed to the 'Endangered' assessment for the global population). The SC **SUGGESTED** that this be discussed during the next WPEB to determine whether a sub-population of this species should be added to the Executive Summary for cetaceans.

APPENDICES

Appendix A: Consolidated set of recommendations of the 26th Session of the Scientific Committee to the Commission, relevant to the Working Party on Ecosystems and Bycatch.

Appendix B: Schedule of stock assessment for the WPEB (2024-2028)

APPENDIX ACONSOLIDATED SET OF RECOMMENDATIONS OF THE 26th SESSION OF THE SCIENTIFIC COMMITTEE
TO THE COMMISSION RELEVANT TO THE WORKING PARTY ON ECOSYSTEMS AND BYCATCH*Extract of the Report of the 26th Session of the Scientific Committee**(IOTC-2023-SC26-R[E]; Appendix 38, Page 203)***Sharks**

SC26.04 (para. 163) The SC **RECOMMENDED** that the Commission note the management advice developed for a subset of shark species commonly caught in IOTC fisheries for tuna and tuna-like species:

Blue shark (*Prionace glauca*) – [Appendix 23](#)

Oceanic whitetip shark (*Carcharhinus longimanus*) – [Appendix 24](#)

Scalloped hammerhead shark (*Sphyrna lewini*) – [Appendix 25](#)

Shortfin mako shark (*Isurus oxyrinchus*) – [Appendix 26](#)

Silky shark (*Carcharhinus falciformis*) – [Appendix 27](#)

Bigeye thresher shark (*Alopias superciliosus*) – [Appendix 28](#)

Pelagic thresher shark (*Alopias pelagicus*) – [Appendix 29](#)

Marine turtles

SC26.05 (para. 164) The SC **RECOMMENDED** that the Commission note the management advice developed for marine turtles, as provided in the Executive Summary encompassing all six species found in the Indian Ocean:

Marine turtles – [Appendix 30](#)

Seabirds

SC26.06 (para. 165) The SC **RECOMMENDED** that the Commission note the management advice developed for seabirds, as provided in the Executive Summary encompassing all species commonly interacting with IOTC fisheries for tuna and tuna-like species:

Seabirds – [Appendix 31](#)

Marine Mammals

SC26.07 (para. 166) The SC **RECOMMENDED** that the Commission note the management advice developed for cetaceans, as provided in the newly developed Executive Summary encompassing all species commonly interacting with IOTC fisheries for tuna and tuna-like species:

Cetaceans – [Appendix 32](#)

GENERAL RECOMMENDATIONS TO THE COMMISSION

SC26.11 (para. 64) The SC **NOTED** that several longline fleets targeting swordfish in the IOTC area of competence are using submerged artificial lights (chemical light sticks or electrically powered lights) attached to the terminal gear for the purpose of attracting the target species and further **NOTED** that Resolution 16/07 prohibits all vessels from using artificial lights to attract fish, without specifying the type of fleet or gear subjected to the Resolution. The SC therefore **RECOMMENDED** that the Commission provides clarity on whether Resolution 16/07 applies to longline fisheries as the current wording is somewhat ambiguous. The SC also **SUGGESTED** that Resolution 16/07 could be amended to clearly state which fleets and/or gears are bound by the Resolution to avoid future doubts.

SC26.12 (para. 66) The SC **RECOMMENDED** that the Commission consider extending measures to prevent finning of sharks such as fins naturally attached including partially attached and tethered for all fisheries or similar, alternative measures (for example, fins artificially attached), providing they had been assessed and endorsed by the SC and Compliance Committee as being equally or more likely to meet the conservation benefit (of a fins naturally attached measure) and are logistically feasible from a compliance monitoring perspective. The SC **NOTED** that while such other measures may be logistically more difficult to implement and monitor for governments, they may be more practical (and beneficial to crew safety) for the fishing industry when conducting their fishing operations and storing shark catches on board.

Status of development and implementation of national plans of action for seabirds and sharks, and implementation of the FAO guidelines to reduce marine turtle mortality in fishing operations

SC26.13 (para. 71) The SC **RECOMMENDED** that the Commission note the current status of development and implementation of National Plans of Action (NPOAs) for sharks and seabirds, and the implementation of the FAO guidelines to reduce marine turtle mortality in fishing operations, by each CPC as provided in Appendix 6, recalling that the IPOA-Seabirds and IPOA-Sharks were adopted by the FAO in 1999 and 2000, respectively, and recommended the development of NPOAs.

NATIONAL REPORTS FROM CPCs

SC26.08 (para. 38) The SC **RECOMMENDED** that the Compliance Committee and Commission note the lack of compliance by 5 Contracting Parties (Members) that did not submit a National Report to the Scientific Committee in 2023, **NOTING** that the Commission agreed that the submission of the annual reports to the Scientific Committee is mandatory.

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

SC26.22 (para. 153) 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.

IOTC species identification guides: Tuna and tuna-like species

SC26.23 (para. 155) 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.

Chairpersons and Vice-Chairpersons of the SC and its subsidiary bodies

SC26.24 (para. 157) The SC **RECALLED** its recommendation in 2022 that the Commission revise the current Rules of Procedure (if necessary) to allow Chairs to serve an additional year or years beyond two terms if no suitable candidates are available to replace them once their terms are completed. The SC **NOTED** that the Commission endorsed the SC recommendations as its own and that therefore this recommendation was approved. In light of this recommendation the terms of several Working Party Chairs as well the SC Chair was extended beyond their two terms and the SC **RECOMMENDED** that this be noted and endorsed by the Commission.

SC26.25 (para. 158) The SC **RECOMMENDED** that the Commission note and endorse the Chairpersons and Vice-Chairpersons for the SC and its subsidiary bodies for the coming years, as provided in [Appendix 7](#).

IMPLEMENTATION OF THE REGIONAL OBSERVER SCHEME

SC26.26 (para. 175) The SC **ACKNOWLEDGED** that the estimated levels of coverage provided in Appendix B.1 of IOTC-2023-SC26-07_rev1 are based on the number of hooks (observed and total), as this effort unit is the only one generally available to the IOTC Secretariat. The SC further **NOTED** that the issue had been previously raised during SC25 and therefore **REITERATED** its **RECOMMENDATION** (SC25.34 (Para. 172)) that at the next revision of Res. 15/02 this is amended to include the mandatory reporting of sets/operations as a additional unit of effort for longline fisheries.

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

Consultants

SC26.27 (para. 187) 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.

Data preparatory meetings and Hybrid meetings

SC26.28 (para. 189) **ACKNOWLEDGING** that holding data preparatory meetings prior to stock assessments is considered to be best practice (as identified by the yellowfin stock assessment external reviewer, the WPTT and the WPDCS) and noting that since 2019 data preparatory meetings were successfully held for the WPTmT, WPTT and WPEB, the SC **AGREED** to continue the practice of having data preparatory meetings in addition to stock assessment meetings for the major IOTC species. The SC **RECOMMENDED** that data preparatory meetings could continue to be held virtually so as not to increase the travel and costs required for the already full IOTC timetable of meetings.

SC26.29 (para. 190) The SC **NOTED** that there had been a few teething problems holding meetings in a hybrid format in 2023, especially related to the costs associated with the audio-visual equipment required, as well as the issues associated with ensuring the equipment was suitable to ensure full participation of both those in person as well as those connecting virtually. However, the SC **AGREED** on the utility of facilitating both in-person and virtual participation at future meetings to ensure increased participation and reduce the logistical costs for many CPCs and observers. As such, the SC **RECOMMENDED** that future Scientific Committee meetings continue to be held in a hybrid format, as well as working parties if possible. The SC further **RECOMMENDED** that all presentations at these meetings be made in person to ensure the aforementioned issues did not adversely affect the quality of the advice being provided.

REVIEW OF THE DRAFT, AND ADOPTION OF THE REPORT OF THE 26TH SESSION OF THE SCIENTIFIC COMMITTEE

SC26.30 (para. 196) The SC **RECOMMENDED** that the Commission consider the consolidated set of recommendations arising from SC25, provided at [Appendix 38](#).

APPENDIX B**ASSESSMENT SCHEDULE FOR IOTC SPECIES AND SPECIES OF INTEREST FROM 2024-2028***Extract of the Report of the 25th Session of the Scientific Committee**(IOTC–2023–SC26–R; Appendix 36, Page 198)*

The SC **ADOPTED** a revised assessment schedule, ecological risk assessment and other core projects for 2024–28, for the tuna and tuna-like species under the IOTC mandate, as well as the current list of key shark species of interest, as outlined in Appendix 36. (IOTC–2023–SC26–R[E], Para. 186).

Working Party on Ecosystems and Bycatch					
Species	2024	2025	2026	2027	2028
Blue shark	–	Data preparatory meeting Full assessment	-	–	–
Oceanic whitetip shark	Data preparation	Indicator analysis	-	Data preparation	–
Scalloped hammerhead	–	–	Data preparatory meeting	–	–
Shortfin mako shark	Data preparatory meeting Full assessment	–	-	Data preparatory meeting Full assessment	
Silky shark	-	–	Assessment*	-	Assessment*
Bigeye thresher shark	–	–	Assessment*	–	-
Pelagic thresher shark	–	–	Assessment*	–	-
Porbeagle shark	–	–	-	–	Assessment*
Mobulid Rays	Interactions/ Indicators	–	-	Interactions/ Indicators	-

Marine turtles	–	Indicators	-	–	Indicators
Seabirds	Development of draft workplan	–	Review of mitigation measures in Res. 23/06	–	–
Marine Mammals	• Review of mitigation measures Review of		-	–	–
Data preparatory meetings	• Methods for using available data for assessments				
Ecosystem Based Fisheries Management (EBFM) approaches	Ecoregions pilot study	ongoing			

* Including data poor stock assessment methods; Note: the assessment schedule may be changed dependent on the annual review of fishery indicators, or SC and Commission requests.

NOTE: (i) the “indicator analysis” is a simple analysis to provide guidance on the stock status based on fishery data such as CPUE, catch, and size frequency data ;(ii) the “full stock assessment” is an assessment to provide the stock status and fishing pressure based on a stock assessment model such as stock synthesis or production model; (iii) the “data preparatory” is a the submission and review by the WP of the fishery data as well as biological parameters for the upcoming stock assessment.