

PROGRESS MADE ON THE RECOMMENDATIONS OF WPEB20 AND SC27

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PURPOSE

To provide participants at the 21st Working Party on Ecosystems and Bycatch (WPEB) with an update on the progress made in implementing those recommendations from the previous WPEB meeting which were endorsed by the Scientific Committee (SC), and to provide alternative recommendations for the consideration and potential endorsement by participants as appropriate given any progress.

BACKGROUND

At the 20th Session of the WPEB, participants agreed on a series of actions to be taken by participants, CPCs, and the IOTC Secretariat on a range of issues. The subsequent table developed and agreed to by the WPEB was provided to the SC for its endorsement at its December 2024 meeting. This paper provides a summary of the progress made on this list of requests so that the working party can evaluate progress made and to agree on the next steps to be taken for each issue.

DISCUSSION

The Rules of Procedure of the Scientific Committee include the following seven core tasks, which are to be supported by the various Working Parties.

- a) recommend policies and procedures for the collection, processing, dissemination and analysis of fishery data;
- b) facilitate the exchange and critical review among scientists of information on research and operation of fisheries of relevance to the Commission;
- c) develop and coordinate cooperative research programmes involving Members of the Commission in support of fisheries management;
- d) assess and report to the Commission on the status of stocks of relevance to the Commission and the likely effects of further fishing and of different fishing patterns and intensities;
- e) formulate and report to the sub-commission, as appropriate, on recommendations concerning conservation, fisheries management and research, including consensus, majority and minority views;
- f) consider any matter referred to by the Commission;
- g) carry out other technical activities of relevance to the Commission.

Recalling that the SC, at its 16th Session adopted a set of reporting terminology SC16.07 (para. 23), which was subsequently endorsed by the Commission at its 18th Session in 2014 (S18, para 10), to further improve the clarity of information sharing from, and among the science bodies, the following two term levels should be noted when interpreting the Reports and Appendix I to this paper:

Level 1: From a subsidiary body of the Commission to the next level in the structure of the Commission:

RECOMMENDED, RECOMMENDATION: Any conclusion or request for an action to be undertaken, from a subsidiary body of the Commission (Committee or Working Party), which is to be formally provided to the next level in the structure of the Commission for its consideration/endorsement (e.g. from a Working Party to the Scientific Committee; from a Committee to the Commission). The intention is that the higher body will consider the recommended action for endorsement under its own mandate, if the subsidiary body does not already have the required mandate. Ideally this should be task specific and contain a timeframe for completion.

Level 2: From a subsidiary body of the Commission to a CPC, the IOTC Secretariat, or other body (not the Commission) to carry out a specified task:

REQUESTED: This term should only be used by a subsidiary body of the Commission if it does not wish to have the request formally adopted/endorsed by the next level in the structure of the Commission. For example, if a Committee

wishes to seek additional input from a CPC on a particular topic, but does not wish to formalise the request beyond the mandate of the Committee, it may request that a set action be undertaken. Ideally this should be task specific and contain a timeframe for the completion.

In addition to the Recommendations endorsed by the SC at its 26nd Session, the SC also made several requests which, although are not passed to the Commission for its endorsement, are considered actions which the Scientific Committee has the mandate to issue. The revised recommendations are contained in Appendix I for the consideration and potential endorsement by the WPEB20.

RECOMMENDATION

That the WPEB **NOTE** the progress made in implementing the recommendations and requests of the 20th Session of the WPEB, and consider whether revised recommendations need to be sent to the SC for its consideration.

APPENDICES

Appendix I: Progress made on the Recommendations and Requests of WPEB20

APPENDIX I

Progress made on the recommendations and requests of WPEB20 and SC27

WPEB20 Rec. No.	Recommendation from WPEB20	SC27 Rec. No.	Recommendation adopted by the SC27	Endorsed at S29	Progress/Comments
WPEB20.0 1 (para. 40)	ACKNOWLEDGING that the bycatch mitigation workshop was held as a part of the data preparatory meeting, the WPEB NOTED that the role and status of a “workshop” as well as a Working Party’s data preparatory meeting is unclear as it is not explicitly defined in the IOTC rules of procedure. The WPEB NOTED that this caused a lot of confusion between participants, in particular regarding whether recommendations from a data preparatory meeting can be taken directly to the SC rather than being approved by the main Working Party meeting. The WPEB NOTED that while the recommendations from the April 2024 WPEB (data preparatory) meeting will be presented to the Scientific Committee (See Appendix XXVI) for its consideration, the WPEB RECOMMENDED that the SC provide clarification on the nature of data “workshops” and working party data preparatory meetings and their capacity to submit their recommendations independently and directly to the SC, to guide future WP recommendation processes.	SC27 (para. 84) SC27 (para. 171- 174)	<p>The SC also NOTED that the WPEB reviewed this recommendation during the main meeting but could not reach an agreement. At present there are no clear guidelines from the SC on whether recommendations from a workshop or WP DP meeting (including a workshop) can go directly to the SC. This is a common issue shared by all WPs, not only to the WPEB, and as such the SC is presently developing its guidelines regarding such procedures.</p> <p>The SC NOTED that the Data Preparatory (DP) meetings were established to facilitate the running of stock assessments. The inaugural DP meeting, held in 2019 for WPTmT, was subsequently followed by meetings for WPTT and WPEB.</p> <p>The SC NOTED that since the DP meeting concept is relatively new and lacks specific rules of procedure, there is no clear guidance on their mandate and decision-making processes. In practice, the DP has operated independently and has sometimes provided direct recommendations to the SC, mainly concerning data issues, but in some other instances, concerning topics other than stock assessment inputs.</p> <p>The SC AGREED that it would be beneficial to clearly define the role of future Working Party intersessional meetings, including DP meetings, especially how they relate to the main WP meeting.</p> <p>The SC NOTED the occasional need of technical workshops, corresponding to a request by the SC or Commission. The SC RECOMMENDED that:</p> <ul style="list-style-type: none"> • Technical workshops are not to be nested within Working Party meetings 	S29 (para. 15-16)	<p>Ongoing:</p> <p>The Commission NOTED paper IOTC-2025-S29-08 submitted by Japan on the operation of IOTC’s meetings which provided some comments and suggestions to improve the efficiency and the effectiveness of IOTC’s meetings. The Commission NOTED the intention of Japan to defer the discussions on this paper to the next session of the IOTC while a review of IOTC meeting operation is conducted inter-sessionally.</p> <p>The Commission REQUESTED that a small informal working group, open to any interested party, but involving at a minimum the Commission Chair and Vice-Chairs, and those of the CoC, SCAF and SC as well as other relevant subsidiary bodies, with support from the IOTC Secretariat, undertake a comprehensive review of IOTC meeting operations. This review should include at a minimum, the following topics:</p> <ol style="list-style-type: none"> a) the current structure of the annual meeting series (CoC, SCAF, TCMP, and Commission meetings); b) the topics raised in paper IOTC-2025-S29-08; c) the annual meeting calendar and meeting formats. d) potential amendments to the IOTC Rules of Procedure that might be required to improve the IOTC’s meetings and their structure.

			<ul style="list-style-type: none"> The terms of reference for such technical workshops should be established ahead of time to clarify their role and decision-making process, including whether they can make direct recommendations to the SC. 		
WPEB20(AS).02 (para. 42)	<p>The WPEB NOTED the recommendations arising from the WPEB Data Prep meeting (DP) which included a shark mitigation workshop and reviewed these again. The WPEB assessment meeting NOTED that there was consensus on the following:</p> <ul style="list-style-type: none"> The WPEB RECOMMENDED that the SC request that CPCs carry out training with fishers to ensure that they are aware of the best practices for handling and release of sharks including the minimisation of trailing gears. The WPEB REQUESTED that CPCs provide information on how they are monitoring the implementation of these best practices in the form of training materials, number of training/handling workshops etc. The WPEB RECOMMENDED that the collection of information on leader material type should be made mandatory under the Regional Observer Scheme Minimum Data Requirements and reported to the Secretariat. The WPEB also RECOMMENDED that these data collected under the ROS are strictly used for scientific purposes in research. The WPEB RECOMMENDED that mitigation surveys should be developed by CPCs in the IOTC areas and with different gear types and configurations to assess mitigation measures such as the type of leaders and other factors to be tested and implemented. The WPEB NOTED that the increase of bite offs by the prohibition of wire leaders could lead to the decrease in the basic information necessary for stock assessment or 	SC27.13 (para. 83)	<p>The SC NOTED that the WPEB conducted a comprehensive research review pertaining to different potential shark mitigation options and produced a summary table listing the strengths and weaknesses of possible mitigation measures focused on longline gear, including limiting the use of wire trace as branch lines or leaders and shark lines (in Appendix VI of WPEB(DP) Report). The SC ACKNOWLEDGED that most of the existing research on this topic comes from the Pacific and Atlantic Oceans and that the information is currently scarce in the Indian Ocean. The SC REQUESTED that the WPEB and WPSE evaluate the potential impacts of limiting wire leader and shark lines on fleet operation and the potential social and economic impacts in the Indian Ocean. In addition, the SC ENCOURAGED CPCs to conduct region specific analyses on these mitigation methods. The SC RECOMMENDED that the Commission consider the research from the summary tables (Appendix VI of WPEB(DP) Report) should they wish to consider additional mitigation measures to strengthen the conservation of vulnerable sharks. The WPEB literature review highlighted that a prohibition on the use of wire leaders and shark lines by longline and other fisheries operating in the IOTC would likely result in a reduction in both the observed catch and the fishing mortality of shark species, particularly in situations where the use of wire leaders and shark lines are common. The SC also considered that further investigation on mitigation measures should be continued.</p>		Complete: The Commission adopted Resolution 25/08 on the conservation of sharks. This contains some many references to recommendations made by the WPEB20 (DP)

	<p>monitoring abundance of shark species. ACKNOWLEDGING the importance of these data, the WPEB SUGGESTED that bite offs are recorded by observers to further inform bycatch estimates.</p> <ul style="list-style-type: none"> • The WPEB NOTED that some studies using large circle hook have reduced injury to sharks by increasing rates of mouth hooking. The WPEB further NOTED that decreasing injury rates associated with large circle hooks results in a reduction in at-vessel mortality for some species. Circle hooks use also reduces observed retention of some vulnerable taxa, such as sea turtles and marlins. The WPEB also NOTED that some experimental sea-trials from other Oceans have reported increases in observed retention of some shark species when using large circle hooks, especially blue shark and crocodile shark, and that the results from a global meta-analysis and multiple experimental sea-trials have found that the use of large circle hooks reduces retention of target species like swordfish. The WPEB further NOTED that there are still many information gaps regarding their effectiveness for sharks, and the number of case studies on deep-setting operations and effect of hook size is still too few and there is also concern that circle hooks may increase shark catches, the WPEB RECOMMENDED continued accumulation of information on circle hook effectiveness including in deep-setting operations. 				
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WPEB20(AS).03 (para. 238)	However, based on handling and release guidelines for mobulids presented to the WPEB, the WPEB RECOMMENDED that the SC consider endorsing a revision to the live release handling procedures provided in Annex 1 of Resolution 19/03 for consideration by the Commission. The WPEB NOTED that work is required to further develop the guidelines for gillnets and this will be done intersessionally with the aim of reporting to the WPEB21. The details of the suggested revisions to the handling procedures can be found in Appendix XVV .	SC27.14 (para.87)	The SC NOTED the revised handling and release guidelines for mobulids endorsed by the WPEB, and RECOMMENDED that the Commission consider revising the live release handling procedures provided in Annex 1 of Resolution 19/03. The SC NOTED that further development of the guidelines for gillnets is required and that this will be done intersessionally with the aim of reporting to the WPEB21. The details of the suggested revisions to the handling procedures can be found in IOTC-2024-WPEB20(AS)-R.		Ongoing: This was not discussed at the Commission and no proposal were brought forward to amend the current Resolution on mobulids. A revised draft of these measures has been developed for discussion during WPEB21.
WPEB20.04 (para 254)	The WPEB RECOMMENDED that the SC consider and endorse the WPEB Program of Work (2025–2029), as provided in Appendix XVII .	SC27 (para 194)	The SC NOTED the proposed Program of Work and priorities for the SC and each of the working parties and AGREED to a consolidated Program of Work as outlined in Appendix 36a-g . The Chairpersons and Vice-Chairpersons of each working party will ensure that the efforts of their respective working parties are focused on the core areas contained within the appendix, taking into account any new research priorities identified by the Commission at its next Session.	S29. (para 37)	Update: [Completed] The Commission NOTED the stock status summaries for species of tuna and tuna-like species under the IOTC mandate, as well as other species impacted by IOTC fisheries and considered the recommendations made by the Scientific Committee to the Commission. The Commission ENDORSED the Scientific Committee's 2024 list of recommendations as its own.
WPEB20.05 (para 258)	The WPEB RECOMMENDED that the Scientific Committee consider the consolidated set of recommendations arising from WPEB20, provided at Appendix XVIII , as well as the management advice provided in the draft resource stock status summary for each of the seven shark species, as well of those for marine turtles and seabirds: Sharks <ul style="list-style-type: none"> Blue sharks (<i>Prionace glauca</i>) – Appendix VII Oceanic whitetip sharks (<i>Carcharhinus longimanus</i>) – Appendix VIII Scalloped hammerhead sharks (<i>Sphyrna lewini</i>) – Appendix IX Shortfin mako sharks (<i>Isurus oxyrinchus</i>) – Appendix X 	SC27.04 (para. 179)	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 (<i>Prionace glauca</i>) – Appendix 23 Oceanic whitetip shark (<i>Carcharhinus longimanus</i>) – Appendix 24 Scalloped hammerhead shark (<i>Sphyrna lewini</i>) – Appendix 25 Shortfin mako shark (<i>Isurus oxyrinchus</i>) – Appendix 26 Silky shark (<i>Carcharhinus falciformis</i>) – Appendix 27 Bigeye thresher shark (<i>Alopias superciliosus</i>) – Appendix 28	S29. (para 37)	Update: [Completed] The Commission NOTED the stock status summaries for species of tuna and tuna-like species under the IOTC mandate, as well as other species impacted by IOTC fisheries and considered the recommendations made by the Scientific Committee to the Commission. The Commission ENDORSED the Scientific Committee's 2024 list of recommendations as its own.

	<ul style="list-style-type: none"> ○ Silky sharks (<i>Carcharhinus falciformis</i>) – Appendix XI ○ Bigeye thresher sharks (<i>Alopias superciliosus</i>) – Appendix XII ○ Pelagic thresher sharks (<i>Alopias pelagicus</i>) – Appendix XIII <p>Other species/groups</p> <ul style="list-style-type: none"> ○ Marine turtles – Appendix XIV ○ Seabirds – Appendix XV ○ Marine mammals – Appendix XVI 	<p>Pelagic thresher shark (<i>Alopias pelagicus</i>) – Appendix 29</p> <p>porbeagle shark (<i>Lamna nasus</i>) – Appendix 30</p> <p>SC27.05 (para. 180) 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:</p> <p>SC27.06 (para. 181) Marine turtles – Appendix 31</p> <p>SC27.06 (para. 181) 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:</p> <p>SC27.07 (para. 182) Seabirds – Appendix 32</p> <p>SC27.07 (para. 182) 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:</p> <p>Cetaceans – Appendix 33</p>		
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WPEB20 Report	WPEB REQUESTS	Update/Progress
WPEB20 (para. 7)	The WPEB NOTED the request from the Commission for the SC to initiate the Management Strategy Evaluation process for blue shark in order to develop a Management Procedure for this species. Therefore, the WPEB REQUESTED the WPM to start discussions around the MSE process for this species, further NOTING that blue shark is scheduled to be assessed in 2025 and so this assessment can feed into the MSE process.	Ongoing: The EU is funding a project that will start in 2026 which will include the development of MSE for blue shark.
WPEB20 (para. 12)	The WPEB REITERATED the importance of the recommendation made by the group in 2023: <i>“ACKNOWLEDGING that the current ROS data requirements already enable the recording of shark fins attached / non-attached to carcasses, the WPEB RECOMMENDED that the SC identifies proper mechanisms to ensure this information is regularly collected and reported to the Secretariat through the ROS.”</i> The WPEB REQUESTED that this is discussed by the WPDCS at its meeting later this year as this may be a more appropriate forum for this discussion.	Ongoing: The current ROS forms provide some information on the shark fins attached / non-attached to carcasses through the weight processing information but this is optional for reporting
WPEB20 (para. 51)	The WPEB REQUESTED that the WPDCS and WGEMS note the study presented by the authors (IOTC-2024-WPEB20(AS)-14), and REQUESTED assistance from the WGEMS for collecting information related to the current status of AI-based species identification.	Ongoing: The WGEMS noted a paper on using AI and edge processing of EM to make the analysis of EM footage more efficient but did not provide further advice on collecting information related to the current status of AI-based species identification.
WPEB20 (para. 54)	ACKNOWLEDGING that this initiative would encompass a broader scope than that addressed by the WPEB, the WPEB REQUESTED the WPDCS to explore ways to establish collaboration across t-RFMOs and with other interested organizations. The goal is to compile images for developing these tools, including the formulation of Terms of Reference and a work plan for initial activities.	Ongoing: CONSIDERING the use of AI for fish identification, the WPDCS NOTED that AI would require substantial training to ensure accurate analysis. NOTING that a similar discussion took place during the WPEB regarding using images from EM for machine learning to identify and distinguish tuna species and other species. The WPDCS further NOTED that various institutions are currently collecting species photos, and various companies with AI systems for species identification, such as MARLIN from India and Fishnet.AI from The Nature Conservancy (TNC) and SUGGESTED that the IOTC

		<p>Secretariat liaise with already established companies to explore the use of their photo collections for identification purposes.</p> <p>ACKNOWLEDGING the need for repositories of species photos, the WPDCS ENCOURAGED each CPC to build its own repository for this purpose.</p>
WPEB20 (para. 152)	<p>The WPEB NOTED that mainline material is consistently being submitted by CPCs in their ROS data. The WPEB NOTED that the ROS minimum data requirements are currently under revision by the WGEMS/WPDCS and that the current working draft review for longline vessels suggested that collecting detailed branchline configuration information should be “mandatory” at the trip level, however, branchline materials and leader materials for catches of sensitive species should be “mandatory” but this should include the possibility to record this information as “unknown” due to the practical difficulties of collecting this information both by onboard human observers and by EMS. The WPEB further NOTED that collecting data on leader material for each fishing set as part of the ROS remains “optional” and includes the possibility of recording this information as “unknown” due to the practical difficulties of collecting this information both by onboard human observers and by EMS. The WPEB NOTED that these points will be further discussed at the WPDCS and the WPEB REQUESTED that the WPDCS consider these recommendations in their discussions.</p>	<p>Complete: The leader material is now mandatory for reporting through the ROS.</p>
WPEB20 (para. 162)	<p>The WPEB REQUESTED the WPDCS to examine the online digital atlas project to receive additional feedback to what has been expressed by the WPEB, in order to design a consolidated project to be presented at SC27.</p>	<p>Complete: The WPDCS ACKNOWLEDGED the benefits of a climate-ocean web portal for the IOTC Area of Competence and RECOMMENDED the development and implementation of the online digital Indian Ocean Atlas in 2025.</p>