
OUTCOMES OF THE 26th SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY: IOTC SECRETARIAT, 06 OCTOBER 2024

PURPOSE

To inform participants at the 15th Working Party on Methods (WPM15) of the recommendations arising from the 26th Session of the Scientific Committee (SC26) held in December 2024, specifically relating to the work of the WPM.

BACKGROUND

At the 26th Session of the SC, the SC noted and considered the recommendations made by the WPM in 2023 that included updates on the MSE process for various IOTC species.

Based on the recommendations arising from the WPM14, the SC26 adopted a set of recommendations, provided in [Appendix A](#) of this paper.

The recommendations contained in [Appendix A](#) was provided to the Commission for consideration at its 28th Session held in May 2024. A separate paper, IOTC–2024–WPM15–04 addresses the responses and actions of the Commission from its 28th session.

In addition, the SC26 reviewed and endorsed a Program of Work for the WPM, including a revised MSE schedule, as detailed in [Appendix B](#). A separate paper (IOTC–2024–WPM15–07) will outline the review and development process for a *Program of Work* for the WPM for the next five years.

DISCUSSION

In addition to the recommendations outlined in [Appendix A](#) and [Appendix B](#), the following extracts from the SC25 Report (IOTC–2023–SC26–R) are provided here for the consideration and action of the WPM15:

Report of the 13th Session of the Working Party on Methods (WPM13)

115. The SC **NOTED** the report of the 14th Session of the Working Party on Methods (IOTC–2023–WPM14–R), including the consolidated list of recommendations provided as an appendix to the report. The meeting was attended by 39 participants (cf. 60 in 2023). Three participants received funding through the MPF funding.
116. The SC **NOTED** that the WPM has reviewed and discussed a wide range of issues including MSE progress for IOTC species, multi-species MSE, exceptional circumstances considerations for bigeye tuna MSE, joint CPUE standardisations, and close kin mark recapture design study for yellowfin tuna.

7.5.1 Update on TCMP06

117. The SC **NOTED** document IOTC-2023-TCMP06-R on the Report of the 6th session of the TCMP held in May 2023. The SC **NOTED** that the WPM had taken into consideration the recommendations and discussions held at that meeting.
118. The SC **NOTED** the following requests made on the skipjack MSE: (1) Investigating the model-based MP; (2) revising the tuning window and revisiting the shape of HCR function, and (3) Increasing options for “maximum TAC change” to include a symmetric 15% or 25% (both upward/downward changes) and asymmetric 15% upward and 10% downward, or 25% upward and 15% downward change.
119. The SC also **NOTED** the requests made on the swordfish MSE: (1) Investigate the model-based MP with MSY-related reference point parameters (in addition to the current depletion reference points); (2) investigating TAC constrains including a symmetric 15% or 10%, and asymmetric 15% upward and 10% downward.
120. The SC **NOTED** the above requests has been the focus of MSE work led by the modelers. The SC further **NOTED** that the SKJ and SWO MSE is currently thought to be in a relatively advanced stage of development in comparison to other species.

7.5.2 Management Strategy Evaluation Progress

121. The SC **NOTED** the good progress made in Management Strategy Evaluations exercises for IOTC species in 2023, and the useful discussions of MSE work at the MSE Task Force meeting (a technical expert group of the WPM) and the TCMP meeting in 2023.

7.5.3 Albacore MSE

122. The SC **NOTED** that the challenges encountered when conditioning OMs based on the albacore stock assessment have been resolved when using Approximate Bayesian Computation (ABC) to condition the albacore OMs. ABC can offer a variety of solutions to potential problems that may arise during conditioning (e.g., cannot account for recent observed catches). The SC endorsed this OM procedure and agreed that a final set of OMs be constructed for the MP evaluation.

7.5.4 Skipjack tuna MSE

123. The SC **NOTED** the SKJ MSE focused on addressing the requests made by TCMP06. The SC **NOTED** that the biomass dynamic model (BDM) did not work. The SC further **NOTED** that the TAC changes tested under the MP is shown to be much less than the TAC constraint applied. The SC agreed that these TAC changes scenarios should still be completed.

124. The SC **NOTED** a few requests made by the WPM15 including reconditioning the OM with the new assessments, and further robustness tests to evaluate autocorrelation in the recruitment deviates comparable to observed recruitment. The SC **REQUESTED** the results to be presented at the TCMP-07 in Feb 2024.

7.5.5 Yellowfin tuna MSE

125. The SC **NOTED** that there has been no further progress on the OM development of yellowfin tuna, pending the results of the new yellowfin stock assessment scheduled in 2024 following the external review of model that took place in February in 2023.

7.5.6 Swordfish MSE

126. The SC **NOTED** that although the two types of MP performed similarly, the data-based MP produced wider inter-annual variability, comparatively higher catches, and increased uncertainty regarding future catches. Additionally, because it is directly linked to the CPUE index, the data-based MP is more responsive. It was also noted that in both robustness trials, the data-based MP outperforms the model-based MP.

7.5.7 General MSE issues

127. The SC **RECALLED** that TCMP and Commission requested to improve the communication of the MSE results by reducing the amount of technical content and for the creation of a small working group to discuss and agree on ways to improve communication between scientists and managers. The SC **NOTED** that the small group has now be convened with the first meeting expected to take place end of the year or early next year.

128. The SC **NOTED** that a virtual TCMP is planned for February 2024, with the main goal of reviewing the MSE work for skipjack tuna and swordfish. It is anticipated that the WPM(MSE) task force meeting in April will address any requests or recommendations made during that meeting. If the MP can be finalized it then can be presented to the TCMP in May to be ready for consideration by the Commission.

129. The SC **NOTED** that there is a need to ensure that any code and input files used for developing MPs is housed internally on an accessible platform, so it is available to other users and not lost when developers move on to other tasks. The SC **NOTED** that ICES uses a Transparency and Assessment Framework (TAF) which is a useful frontend to direct users to the locations of relevant documents and code (e.g. Github repositories) that enable users to re-run assessments and other analyses, but that a much smaller system would be needed for the IOTC. The SC **NOTED** that most important information to be curated would be the input files, executables, and control files (not the large volume of output files), and **RECOMMENDED** that the Commission ensure that the IOTC Secretariat is provided with the necessary resources to manage the curation of this information.

RECOMMENDATION

That the WPM:

- 1) **NOTE** paper IOTC–2024–WPM14–03 which outlined the main outcomes of the 26th Session of the Scientific Committee, specifically related to the work of the WPM.
- 2) **UPDATE** Appendix B as required.
- 3) **CONSIDER** how best to progress these issues at the present meeting.

APPENDICES

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

Appendix B: Schedule of MSE for the WPM (2023–2027).

APPENDIX A

CONSOLIDATED SET OF RECOMMENDATIONS OF THE 26TH SESSION OF THE SCIENTIFIC COMMITTEE (4 – 8 DECEMBER 2023) TO THE COMMISSION RELEVANT TO THE WORKING PARTY ON METHODS

Extract of the Report of the 26th Session of the Scientific Committee

(IOTC-2023-SC26-R; Appendix 38)

GENERAL RECOMMENDATIONS TO THE COMMISSION

REPORT OF THE 14TH SESSION OF THE WORKING PARTY ON METHODS (WPM14)

General MSE issues

SC26.19 (para. 129) The SC NOTED that there is a need to ensure that any code and input files used for developing MPs is housed internally on an accessible platform, so it is available to other users and not lost when developers move on to other tasks. The SC NOTED that ICES uses a Transparency and Assessment Framework (TAF) which is a useful frontend to direct users to the locations of relevant documents and code (e.g. Github repositories) that enable users to re-run assessments and other analyses, but that a much smaller system would be needed for the IOTC. The SC NOTED that most important information to be curated would be the input files, executables, and control files (not the large volume of output files), and RECOMMENDED that the Commission ensure that the IOTC Secretariat is provided with the necessary resources to manage the curation of this information. SC25.22 (para. 123) The SC however **CONSIDERED** that it is advisable to have focused dialogue with managers on those MSE which are more advanced such as that for SKJ. The SC **RECOMMENDED** that a virtual TCMP is tentatively convened early in 2024 with a special focus on MSE for SKJ

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

SC26.21 (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

SC26.22 (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

SC26.23 (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.

SC26.24 (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

SC26.25 (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

SC26.26 (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

SC26.27 (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..

SC26.28 (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

SC26.29 (para. 196) The SC **RECOMMENDED** that the Commission consider the consolidated set of recommendations arising from SC25, provided at [Appendix 38](#).

APPENDIX B

SCHEDULE OF WORK FOR THE DEVELOPMENT OF MANAGEMENT PROCEDURES FOR KEY SPECIES IN THE IOTC AREA

Year	Albacore	Skipjack	Yellowfin	Bigeye	Swordfish
2023	<p>WPs/SC: Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs.</p>	<p>WPs/SC: Consider recommendations from the Commission, review and refine further MSE work if needed and provide advice on the performance of candidate MPs.</p>	<p>WPs/SC: Consider recommendations from the Commission and consider outcomes of the independent review of the Yellowfin assessment. Discuss and agree on a plan for further development of MSE and candidate MPs.</p>	<p>WPs/SC:</p>	<p>WPs/SC: Consider recommendations from the Commission, review and refine further MSE work if needed and provide advice on the performance of candidate MPs.</p>
2024	<p>TCMP: Provide advice to Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies and provide direction to the WPs/SC on the need to undertake further MSE of candidate or alternative MPs.</p> <p>WPs/SC: Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs.</p>	<p>TCMP: Provide advice to Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies. Decision and adoption of an MP.</p> <p>WPs/SC: Consider recommendations from the Commission</p>	<p>TCMP: Provide advice to Commission on elements of OMs and, if possible, candidate MPs, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies and provide direction to the WPs/SC on the need to undertake further MSE.</p> <p>WPs/SC: Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs.</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC: Consider outcomes of BET MSE review and provide advice to TCMP/Commission</p>	<p>TCMP: Provide advice to the Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies. Decision and adoption of an MP.</p> <p>WPs/SC: Consider recommendations from the Commission</p>

2025	<p>TCMP: Provide advice to Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies. Decision and adoption of an MP.</p> <p>WPs/SC: Consider recommendations from the Commission</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>	<p>TCMP: Provide advice to Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies and provide direction to the WPs/SC on the need to undertake further MSE of candidate or alternative MPs.</p> <p>WPs/SC: Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs.</p>	<p>TCMP: Provide advice to Commission on the outcomes of the BET MSE review</p> <p>Commission: Consider advice from subsidiary bodies on the outcomes of the BET MSE review and provide direction to WP/SC, if required.</p> <p>WPs/SC: Consider recommendations from the Commission (if any).</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>
2026	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>	<p>TCMP: Provide advice to Commission on elements of candidate MPs, and any proposed Resolutions for an MP, that require a decision by the Commission, including the performance of candidate MPs against Commission objectives.</p> <p>Commission: Consider work and advice from subsidiary bodies. Decision and adoption of an MP.</p> <p>WPs/SC:</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>	<p>TCMP:</p> <p>Commission:</p> <p>WPs/SC:</p>

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