PROGRESS MADE ON THE RECOMMENDATIONS AND REQUESTS OF WPB22 AND SC27

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PURPOSE

To provide participants at the 23rd WPB with an update on the progress made in implementing those recommendations from the previous Working Party on Billfish (WPB) 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 22nd Session of the WPB, 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 WPB was provided to the SC for its endorsement at its December 2024 meeting.

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 27th 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 WPB23.

RECOMMENDATION

That the WPB **NOTE** the progress made in implementing the recommendations and requests of the 22nd Session of the WPB and consider whether revised recommendations need to be sent to the SC for its consideration.

APPENDICES

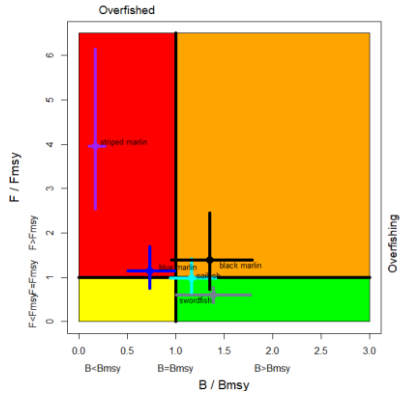
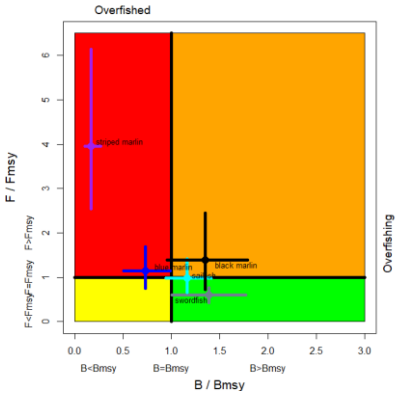
Appendix I: Progress made on the Recommendations and Requests of WPB22

APPENDIX I

Progress made on the recommendations and requests of WPB22 and SC27

WPB22 Rec. No.	Recommendation from WPB22	SC27 Rec. No.	Recommendation adopted by the SC27	Progress/Comments
WPB22.01	***Review of new information on the status of black and striped marlins*** (para 148): In this context, the WPB **NOTED** that a Joint analysis of fleet specific CPUE could be useful because if catch effort data from multiple fleets were all representative of abundance, there should be no conflict between them. A Joint analysis based on a consistent statistical framework would help account for difference in catchability between fleets and can increase the power to identify potential factors that might explain the difference between fleets. Further, the fleets can complement each other in spatial and temporal coverage of the stock, thus increasing the chance of producing a representative abundance index using a unified modelling approach. As such, the WPB **RECOMMENDED** that the SC dedicate effort to harmonise the standardised methods for different fleets and to develop a joint analysis combining catch effort data from key fleets for major billfish species where feasible.	SC27.10	***REPORT OF THE 22ST SESSION OF THE WORKING PARTY ON BILLFISH (WPB22)*** (para. 58) **NOTING** that a joint analysis of fleet specific CPUE based on a consistent statistical framework which accounts for differences in catchability between fleets could be useful for assessing species under the mandate of WPB, the SC **RECOMMENDED** that the Commission urge the CPCs to dedicate effort to harmonising the standardised methods for different fleets and to develop a joint analysis combining catch effort data from key fleets for major billfish species where feasible.	Update: Ongoing. A Joint tRFMO longline CPUE workshop is scheduled to take place in November, providing an ideal forum to discuss the standardisation methods for the longline catch effort data.
WPB22.02	***Resolution 18/05 Catch Limits*** (Para 171) The WPB **NOTED** that the catch limits for black marlin and Indo-Pacific sailfish set by Resolution 18/05 have consistently been exceeded since its implementation. Therefore, the WPB **RECOMMENDED** that the SC advise the Commission to reassess the effectiveness of the current measures within this resolution. Additionally, the WPB **RECOMMENDED** that the SC advise the Commission of the need to revise Resolution 18/05 to update the catch limits based on the	SC27.11	***Revision of catch levels of marlins under Resolution 18/05*** (para. 62) The SC **RECOMMENDED** that the Commission reassess the effectiveness of the current measures within this resolution and to revise Resolution 18/05 to update the catch limits based on the latest stock assessments and projections for the billfish species.	The Commission has yet to revise Resolution 18/05

	latest stock assessments and projections for the billfish species			
WPB 22.03	***Revision of the WPB Program of work (2025–2029)*** (para 176): The WPB **RECOMMENDED** that the SC consider and endorse the WPB Program of Work (2025–2029), as provided in Appendix IX.		***Program of Work (2025–2029) and assessment schedule*** (para 197) The SC **NOTED** that the consolidated table of priorities does not replace the full programme of work of each working party (Appendix 36a-g) and that adequate attention and focus should still be allocated to those activities where possible. The SC further **NOTED** that Table 3 has been developed by the SC and working party Chairs to provide more specific direction to the IOTC Secretariat and the SC Chair as to the priorities of the SC so that, if and when external funding becomes available intersessionally, it is possible to clearly prioritise across all working parties based on the objectives of the SC (as agreed in IOTC–2014–SC17–R, para. 179).	Update: Completed
WPB21.04	***Date and place of the 23rd and 24th Sessions of the Working Party on Billfish*** (para 181): The WPB **RECOMMENDED** the SC consider early September as a preferred time period to hold the WPB23 in 2025. As usual it was also AGREED that this meeting should continue to be held back-to-back with the WPEB and that in 2025 WPB will be held in the week following the WPEB.		***Final Meeting schedule*** (para 204) 204. The SC **REQUESTED** that the schedule of Working Party and Scientific Committee meetings for 2025 and 2026 provided in Appendix 38 be communicated by the IOTC SC Chairperson to the Commission for its endorsement.	Update: Completed The meeting schedule was adopted with the meeting to be held in September, back-to-back with the WPEB.

WPB22.05	***Review of the draft, and adoption of the Report of the 21st Session of the Working Party on Billfish*** (para 182): The WPB **RECOMMENDED** that the Scientific Committee consider the consolidated set of recommendations arising from WPB22, provided at Appendix X, as well as the management advice provided in the draft resource stock status summary for each of the five billfish species under the IOTC mandate, and the combined Kobe plot for the five species assigned a stock status in 2024 (Fig. 5): ○ Swordfish (*Xiphias gladius*)– Appendix IV ○ Black marlin (*Makaira indica*) – Appendix V ○ Blue marlin (*Makaira nigricans*) – Appendix VI ○ Striped marlin (*Tetrapturus audax*) – Appendix VII ○ Indo-Pacific sailfish (*Istiophorus platypterus*) – Appendix VIII  **Fig. 5.** Combined Kobe plot for swordfish (grey), Indo-pacific sailfish (cyan), black marlin (black), blue marlin (blue) and striped marlin (purple) showing the 2022, 2023, and 2024 estimates of current stock size (SB or B, species assessment dependent) and current fishing mortality (F) in relation to optimal spawning stock size and optimal fishing mortality. Cross bars illustrate the range of uncertainty from the model runs.	SC25.03 (para. 162)	***Billfish*** The SC **RECOMMENDED** that the Commission note the management advice developed for each billfish species under the IOTC mandate, as provided in the Executive Summary for each species, and the combined Kobe plot for the five species assigned a stock status in 2024 (Fig. 4): ○ Black marlin (Istiompax indica) – Appendix 18 ○ Blue marlin (Makaira nigricans) – Appendix 19 ○ Striped marlin (Kajikia audax) – Appendix 20 ○ Indo-Pacific sailfish (Istiophorus platypterus) – Appendix 21 ○ Swordfish (Xiphias gladius) – Appendix 22  **Fig. 4.** Combined Kobe plot for swordfish (2021 with assessment conducted in 2023, grey), Indo-Pacific sailfish (2019 with assessment conducted in 2022, cyan), black marlin (2022 with assessment conducted in 2024, black), blue marlin (2020 with assessment conducted in 2022, blue) and striped marlin (2022 with assessment conducted in 2024, purple) showing the estimates of current stock size (SB or B, species assessment dependent) and current fishing mortality (F) in relation to optimal stock size and optimal fishing mortality. Cross bars illustrate the range of uncertainty from the model runs. Given unresolved uncertainty in the assessment, status for black marlin is uncertain.	Update: Completed

WPB22 Report	WPB22 REQUESTS	Update/Progress
Para. 14	The WPB **REQUESTED** that the IOTC Secretariat continue to annually prepare a paper on the progress of the recommendations arising from the previous WPB, incorporating the final recommendations adopted by the Scientific Committee and endorsed by the Commission.	Update: Completed (IOTC-2025-WPB23-06).
Para. 40	**ACKNOWLEDGING** the contribution of Iranian gillnet fisheries to the total billfish catches, the WPB **REQUESTED** the Secretariat to work closely with Iranian and Sri Lanka scientist on the CPUE analysis including neritic and billfish species	Update: A consultant was commissioned in 2024 to Join a data support mission by the Secretariat to Sri Lanka to evaluate the feasibility of using the data from the gillnet fishery of Sri Lanka for CPUE analysis
Para. 42	**ACKNOWLEDGING** the importance of morphometric relationships in harmonising size-frequency data collected using different measurement types for billfish, due to varying dressing procedures, the WPB **REQUESTED** the Secretariat to develop a new voluntary form for reporting individual morphometric data, to enhance the IOTC reference morphometric relationships	Update: Ongoing. The Secretariat has designed a database structure and defined a draft of exchange format for biological data but that the work is behind schedule.
Para. 82	The WPB **REQUESTED** clarification on the type of length which was used for the analyses as it was indicated Fork Length in the document. The author will check the type of measurement that has been performed to confirm.	Update: Author of Paper IOTC–2024–WPB22–12 to update
Para. 90	The WPB **REQUESTED** the authors to provide a chart comparing the new time series of standardised CPUE index (2005-2023) with the previous one (2005-2020) derived with a similar approach (IOTC–2021–WPB19–13_Rev1) to assess the consistency in the trends and CPUE status in recent years.	Update: Author of Paper IOTC-2024-WPB22-17_Rev2 to update
Para. 111	The WPB **REQUESTED** for future assessments to document how the steepness value was determined and, if possible, to explore whether it is possible to derive steepness using existing reproductive and biological data. This would support more informed decisions regarding steepness values.	Update: Author of Paper IOTC-2024-WPB22-23 to update
Para. 112	The WPB **REQUESTED** a sensitivity analysis using a steepness value of 0.6 and another to estimate steepness within the model. It was noted these tests yielded results similar to the reference model (i.e., relatively little impact of changing steepness) and found it interesting that the model could offer some insights into estimating steepness	Update: Completed by the author during the meeting
Para. 146	The WPB **NOTED** the relatively poor fits of the Japanese and Taiwanese CPUE indices in recent years. This is mainly due to their conflict with the Indonesian CPUE index. An additional model (S6) was **requested** which excluded the Indonesia index and this model has resulted in improvements to both indices, as expected	Update: Completed by the author during the meeting

Para. 149	The WPB **NOTED** that the early Japanese index (1979-2004) was not included in the assessment, following the recommendation from Japanese scientist which pointed out that there has been some changes in the logbook system in the early 1990s. The WPB **REQUESTED** a sensitivity to be concluded that include the early Japanese index (similar to the sensitivity run in the striped marlin assessment). This sensitivity leads to a more pessimistic estimate of the stock status. The WPB **REQUESTED** that the reason for excluding the early index in the stock assessment to be better documented to facilitate the assessment decisions as this might have an impact on many other species	Update: Completed by the author during the meeting
Para. 153	On the weight-of-evidence available in 2022, the WPB **AGREED** that the stock status of striped marlin is determined to be overfished and subject to overfishing. The WPB **AGREED** that projections are to be conducted using the base case (S2) of the JABBA model to provide management advice. However, the WPB **NOTED** that the age-structured model can better account for the lagging effect in stock recovery and **requested** the projections to also be conducted using the SS3 model in the future iteration of striped marlin assessment.	Update: Ongoing
Para. 154	The WPB **ADOPTED** the management advice developed for striped marlin, as provided in the draft status summary, and **REQUESTED** that the IOTC Secretariat update the draft stock status summary with the latest 2022 interaction data to be provided to the SC as part of the draft Executive Summary, for its consideration: • Striped marlin (*Kajikia audax*) – Appendix VII	Update: Completed
Para. 158	The WPB **ADOPTED** the management advice developed for black marlin, as provided in the draft status summary, and **REQUESTED** that the IOTC Secretariat update the draft stock status summary with the latest 2022 interaction data to be provided to the SC as part of the draft Executive Summary, for its consideration: • Black marlin (Istiompax indica) – Appendix IV	Update: Completed
Para. 166	The WPB **REQUESTED** that in future, the WPB meeting agenda includes an agenda item for the annual review of "Exceptional Circumstances" and that that agenda item is supported by a paper (submitted to the meeting by the papers deadline) which reviews available recent data, information and evidence relevant to the key criteria outlined in the Exceptional Circumstance Guidelines. This will better facilitate discussion and provision of advice from WPB to WPM and the IOTC SC	Update: Completed

Para. 174	The WPB **NOTED** that several Working Parties had identified CPUE standardisation as a priority and therefore **REQUESTED** that the WPM consider facilitating a cross-cutting CPUE standardisation workshop.	Update: Ongoing. A Joint tRFMO longline CPUE workshop is scheduled to take place in November, providing an suitable forum to discuss the standardisation methods for the longline catch effort data
Para. 175	**NOTING** this request for a CPUE standardisation workshop, and the need to optimise the running of stock assessments, the WPB **REQUESTED** that a data preparatory meeting is held in 2025 which could cover both the CPUE standardisation and data preparatory work for the upcoming assessments.	Update: This has not been planned for the 2025 meeting schedule by the SC.
Para. 179	The WPB **REQUESTED** that CPCs that may be interested in hosting the 23rd and 24th Working Party on Billfish meetings contact the Secretariat.	Update: France offered to Host the WPB and WPEB meeting in 2025 in Sete, France.