

PROGRESS MADE ON THE RECOMMENDATIONS AND REQUESTS OF WPB16 AND SC21

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PURPOSE

To provide participants at the 17th 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 16th 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 2018 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 19th 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 WPB14.

RECOMMENDATION

That the WPB **NOTE** the progress made in implementing the recommendations and requests of the 17th 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 WPB16](#)

APPENDIX I

Progress made on the recommendations and requests of WPB16 and SC21

WPB15 Rec. No.	Recommendation from WPB15	SC20 Rec. No.	Recommendation adopted by the SC20	Progress/Comments
WPB16.01	<p><i>IOTC Resolutions</i></p> <p>(para. 9): RECALLING that one of the Indian Ocean billfish species (shortbill spearfish, <i>Tetrapturus angustirostris</i>) is currently not listed among the species managed by IOTC, and considering the ocean-wide distribution of this species, its highly-migratory nature, and that it is a common bycatch in IOTC managed fisheries, the WPB reiterated its previous RECOMMENDATION that the Scientific Committee consider requesting the Commission to include it in the list of species to be managed by the IOTC</p>	SC21.12 Para. 44	<p><i>IOTC Resolutions</i></p> <p>The SC recalled its previous RECOMMENDATION that on the next revision of the IOTC Agreement, the short bill spearfish (<i>Tetrapturus angustirostris</i>) be included as an IOTC species.</p>	
WPB16.02	<p><i>Genetic population structure for striped marlin</i></p> <p>(para. 61): The WPB NOTED the low sample sizes of marlins (i.e., zero samples for striped marlin) in phase 1 sampling of the IOTC stock structure project and RECOMMENDED that marlins are prioritized in phase 2 in order to resolve the stock structure uncertainty for this species.</p>	SC21 Para. 52	<p><i>New information on biology</i></p> <p>The SC noted a new genetics study (USA/VIMS Study) indicated a potential existence of 2 stocks of striped marlin in the Indian Ocean, which is different to the one-stock assumption currently used for management. Given its implications for management, the SC REQUESTED that marlins are prioritized in the second phase of the IOTC stock structure project (currently implemented by CSIRO) to resolve the stock structure uncertainty for this species.</p>	<p>Update: [Ongoing]</p> <p>Additional samples of billfish species have been collected. For striped marlin, 22 samples have been collected and the DNA extracted and sent to DArT for sequencing.</p>
WPB16.03	<p><i>Revision of the WPB Program of work (2018–2022)</i></p> <p>(para. 216): The WPB RECOMMENDED that the SC consider and endorse the WPB Program of Work (2019–2023), as provided at Appendix XI.</p>	SC21 Para. 220	<p><i>Program of Work (2019–2021)</i></p> <p>The SC noted the proposed Program of Work and priorities for the Scientific Committee and each of the Working Parties and AGREED to a consolidated Program of Work as outlined in Appendix 35a-g. The Chairpersons and Vice-Chairpersons of each working party shall ensure that the efforts of their working party 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.</p>	<p>Update: Completed</p>

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WPB16.04

Review of the draft, and adoption of the Report of the 16th Session of the Working Party on Billfish

(para. 146): The WPB **RECOMMENDED** that the Scientific Committee consider the consolidated set of recommendations arising from WPB16, provided at [Appendix XII](#), 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 2018 (Fig. 9):

- Swordfish (*Xiphias gladius*) – [Appendix VI](#)
- Black marlin (*Makaira indica*) – [Appendix VII](#)
- Blue marlin (*Makaira nigricans*) – [Appendix VIII](#)
- Striped marlin (*Tetrapturus audax*) – [Appendix IX](#)
- Indo-Pacific sailfish (*Istiophorus platypterus*) – [Appendix X](#)

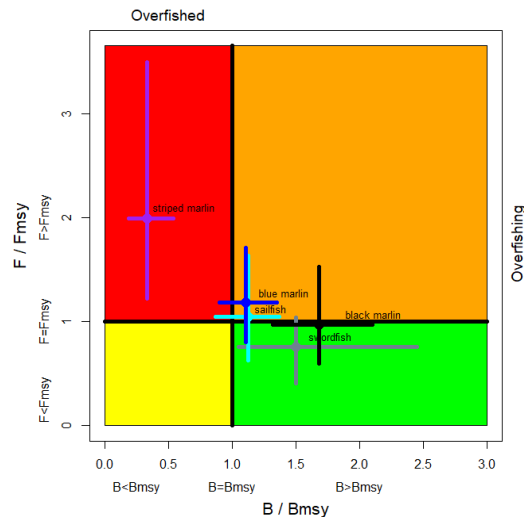


Fig. 15. Combined Kobe plot for swordfish (grey), indo-pacific sailfish (cyan), black marlin (black), blue marlin (blue) and striped marlin (purple) showing the 2016, 2017, and 2018 estimates of current stock size (SB or B, species assessment dependent) and current fishing mortality (F) in relation to optimal spawning stock size and optimal fishing mortality. Cross bars illustrate the range of uncertainty from the model runs.

SC21.02

(para. 200)

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 2018 (Fig. 6):

- Swordfish (*Xiphias gladius*) – [Appendix 12](#)
- Black marlin (*Makaira indica*) – [Appendix 13](#)
- Blue marlin (*Makaira nigricans*) – [Appendix 14](#)
- Striped marlin (*Tetrapturus audax*) – [Appendix 15](#)
- Indo-Pacific sailfish (*Istiophorus platypterus*) – [Appendix 16](#)

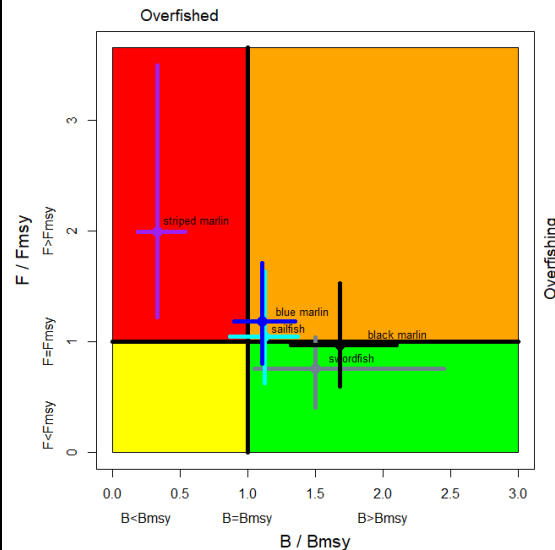


Fig. 4. Combined Kobe plot for swordfish (grey: 2015), indo-pacific sailfish (cyan: 2014), black marlin (black: 2018), blue marlin (blue: 2015) and striped marlin (purple: 2018) showing the estimates of stock size (SB or B, species assessment dependent) and fishing mortality (F) in relation to MSY-based reference points. Numbers in brackets indicate the last year of data available at the time of the assessment. Cross bars illustrate the range of uncertainty from the model runs

Update: Completed

		SC21.13 (para. 66)	<p style="text-align: center;"><i>Swordfish MSE</i></p> <p>The SC noted that one of the team members involved in the development of the swordfish OM is starting a PhD in 2019 with IO Swordfish MSE included as one objective. The SC noted that salaries are already covered for next years for that team member, but further funding is required to support the travelling and time for two short-term visits to the JRC, as well as to attend IO MSE-technical workshops and WPM meeting in 2019. The SC therefore RECOMMENDED to fund this work during 2019 in order to progress the work on the IOTC MSE for SWO, with a total of 10.000€ requested for 2019, further noting that part of the funds (around 3.000€) should be available earlier in the year to start the work no later than March 2019</p>	Update: Completed
		SC21.14 (para. 69)	<p style="text-align: center;"><i>Revision of catch levels of Marlins under Resolution 18/05</i></p> <p>The SC noted that catches in recent years for Black Marlin, Blue Marlin, Striped Marlin and Indo-Pacific Sailfish have all exceeded the catch limits set by Resolution 18/05, and that current catch trends for all four species show no signs of decline in line with meeting the catch limits by 2020. As such, the SC urgently RECOMMENDED that measures are agreed to reduce current catches to the limits set for all four species covered by Resolution 18/05 as per the management advice given in the Executive Summaries.</p>	Update: Ongoing.

WPB15 Report	WPB15 REQUESTS	Update/Progress
Para. 8	The WPB ACKNOWLEDGED and REITERATED the request from the Scientific Committee for full compliance with Resolutions 15/01 and 15/02 and REQUESTED that all involved CPCs take immediate action to overcome any issues preventing the timely and complete reporting of all mandatory statistical data to the IOTC Secretariat	Update: Ongoing.
Para. 25	The WPB NOTED that the IOTC Secretariat is continuing to implement a number of revisions to the nominal catches that impact current estimates for billfish, including Comoros, Indonesia's fresh longline catches, as well as incorporating improvements in the catch-and-effort reported by I.R. Iran, and changes to the species composition submitted by Taiwan,China, and REQUESTED that an update is provided during the next WPB meeting	Update: The IOTC Secretariat to provide an update during the WPB meeting.
Para. 28	The WPB NOTED the main billfish data issues, by type of dataset and fishery, that are considered to negatively affect the quality of the statistics available at the IOTC Secretariat, which are provided in Appendix V, and REQUESTED that the CPCs listed in the Appendix make efforts to remedy to the identified data issues and report back to the WPB at its next meeting	Update: CPCs to provide an update during the WPB meeting.
Para. 29	Taiwan,China: While number of Taiwanese fresh (small-scale) longline vessels has decreased by around 30% in recent years (from 307 vessels in 2013, to 2012 vessels in 2016), longline catches remained at similar levels, raising average longline catches per vessel from 100 t in 2013 to around 175 t in 2016. Over the same period, the proportion of swordfish reported by Taiwanese flesh longline vessels increased from around 8% to over 30%, due to improvements in data collection and the estimation of catches by species, rather than changes in targeting. To avoid discontinuities in the estimates of catches by species, the WPB REQUESTED that Taiwan,China provide the IOTC Secretariat with revisions to the species composition of historical catches prior to the WPB meeting in 2019	Update: Taiwan,China to provide an update during the WPB meeting.
Para. 31	The WPB REQUESTED that the IOTC Secretariat clarify with both India and I.R. Iran the reasons for the sudden increase in catches of black marlin; specifically whether the increases are the result of the development of a new fishery, or alternatively improvements in data collection and reporting in order to assess whether catches in earlier years may have been underestimated and require adjustments in order to maintain continuity with latest (higher) catches of black marlin	Update: The IOTC Secretariat to provide an update during the WPB meeting, based on a review of the existing documents/data submitted to IOTC. A Data Compliance and Support mission was also planned for India in June – to address a range of issues regarding increases in a number IOTC species, including billfish and tropical tunas - but postponed until a later date due to logistical issues.

Para. 32	The WPB REQUESTED that for the next WPB meeting in 2019, the IOTC Secretariat provide an information document to provide background information on the increase in catches of marlins in recent years, including revisions to the official data provided by CPCs, and any changes in the methodology for estimating catches conducted by the IOTC Secretariat.	Update: The IOTC Secretariat to provide an update during the WPB meeting.
Para. 44	The WPB NOTED that information on Kenya's longline fleet, including nominal catches and time-area catch-and-effort, has not been reported to the IOTC Secretariat since 2010 and REQUESTED that Kenya submit these data to the IOTC Secretariat as a matter of priority.	Update: In progress. In 2019 Kenya did report catch-and-effort, but not nominal catches. The IOTC Secretariat has requested Kenya submit all mandatory datasets required by Resolution 15/02.
Para. 50	The WPB CONSIDERED the results of the alternative catch series and REQUESTED that the WPDCS consider endorsing the catch series.	Update: The WPDCS ACKNOWLEDGED that the methodologies adopted and the results obtained by the IOTC Secretariat in collaboration with national scientists for the revision of Indonesian fresh-tuna longliners best scientific estimates have been presented under agenda item 4.3 and endorsed by the WPDCS
Para. 37	The WPB AGREED that the systematic deviations in the retrospective analysis provide little confidence in the predictive capabilities of the model, and as such the resultant fishery reference points for black marlin should be treated with caution. The WPB REQUESTED that the catch and effort data provided for this species be discussed by the WPDCS in 2018 and revised information be submitted to the secretariat by CPCs that have catches of black marlin, prior to the next assessment of the species	Update: As above.