
PROGRESS MADE ON THE RECOMMENDATIONS AND REQUESTS OF WPB14 AND SC19

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PURPOSE

To provide participants at the 15th 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 14th 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 November 2016 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 14th 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 WPB14](#)

APPENDIX I

Progress made on the recommendations and requests of WPB14 and SC19

WPB14 Rec. No.	Recommendation from WPB14	SC19 Rec. No.	Recommendation adopted by the SC19	Progress/Comments
WPB14.01	<p><i>IOTC Resolutions</i></p> <p>(para. 9): NOTING the comments by the FAO Legal Counsel at the 20th Session of the IOTC:</p> <p><i>“First, the Legal Counsel informed the Members that FAO fully acknowledged that the IOTC Agreement, negotiated between 1991 and 1993, and which came into force in 1996, should be modernized, in order to reflect recent developments in the Law of the Sea and modern trends in fisheries management”. (S20 Para. 94 To be adopted)</i></p> <p>the WPB RECOMMENDED that on the next revision of the IOTC Agreement, short billed spearfish are included as an IOTC species.</p>	SC19.13	<p><i>IOTC resolutions</i></p> <p>(para. 46) The SC RECOMMENDED that on the next revisions of the IOTC Agreement, short billed spearfish be included as an IOTC species.</p>	<p>Update:</p> <p>(Para. 9) The Commission NOTED the Scientific Committee recommendation <i>SC17.09</i>, which indicated that shortbill spearfish (<i>Tetrapturus angustirostris</i>) should be included in the list of species to be managed by the IOTC considering the ocean-wide distribution of this species, its highly-migratory nature, and that it is a common bycatch in IOTC managed fisheries. However, adding a new species to the official list of those to be covered by the IOTC mandate would require a modification of the IOTC Agreement. Such an inclusion would be considered at that time.</p>
WPB14.02	<p><i>Billfish species identification</i></p> <p>(para. 21): The WPB RECOMMENDED that funds are allocated for further printing of the species ID guides so that these can be distributed amongst the sports fishing clubs for recreational activities to improve the quality of data reported from these fisheries.</p>	SC19.14	<p><i>Billfish species identification</i></p> <p>(para. 48) The SC AGREED on the importance of the hard, waterproof copies of the IOTC species identification guides for observers and port samplers, and RECOMMENDED that funds are allocated for further printing of the species ID guides for distribution to sports fishing clubs and recreational fisheries to improve the quality of data reported, and that funds also be continued for the translation of these into the priority languages identified by the SC.</p>	Update: [Ongoing]
WPB14.03	<p>(para. 24): The WPB AGREED on the importance of the hard, waterproof copies of the IOTC species identification guides for observers and port samplers in improving the quality of data collected and RECOMMENDED that funds be continued for the translation of these into the priority languages identified by the SC.</p>			
WPB14.04	<p><i>Review of the statistical data available for billfish</i></p> <p>(para. 40): The WPB NOTED that many CPCs, responsible together for cumulative estimated billfish</p>	SC19 Para. 49	<p><i>Review of the statistical data available for billfish</i></p> <p>The SC NOTED that many CPCs important for catches of billfish species do not submit to Secretariat nominal catch</p>	Update: [Ongoing] For further details, see also document IOTC-2017-WPB15-07

	species catches up to 50% of total catch, do not submit to Secretariat either accurate nominal catch data and/or CPUE series (as per Res. 15/01 and 15/02). Particularly for black marlin (BLM) and Indo-Pacific sailfish (SFA) CPUE-based assessment analysis consider only gear/countries data covering less than 15% of estimated nominal catches. The WPB NOTED the Secretariat efforts in conjunction with CPCs (capacity building, observer training) to improve the current situation and RECOMMENDED CPCs to fully comply with Resolutions 15/01 and 15/02, providing detailed statistics at the required deadlines.		data or catch-and-effort, particularly in the case of black marlin and Indo-Pacific sailfish. For those two species, the CPUE based assessments currently only use data covering less than 15% of the estimated nominal catches. Therefore the SC strongly REQUESTED CPCs to fully comply with the data reporting standards of Resolutions 15/01 and 15/02.	
WPB14.05	Stock structure project (para. 51): In light of the ongoing delays in the commencement of the EU-funded Indian Ocean stock structure project, the WPB RECOMMENDED that the Scientific Committee ensure that a full review is undertaken and that results from this study (and others that have taken place since the project plan was developed) are evaluated and that the work plan of the EU-funded Indian Ocean stock structure project is revised where appropriate.	SC19 Para. 50	Stock structure project In light of the ongoing delays in the commencement of the EU-funded Indian Ocean stock structure project, the SC PROPOSED that the project workplan be revised where appropriate, in light of additional reviews and evaluation of similar studies that have taken place since the original stock structure proposal.	Update: [Ongoing]
WPB14.06 WPB4.07	Swordfish habitat and behavior (para. 70): Therefore, the WPB RECOMMENDED that starting from this WPB14, swordfish is treated as a single stock and separate sections related to swordfish for the southwest Indian Ocean are removed from the executive summary and from the summary of available data for all billfish species. (para. 76): At the same time, the WPB NOTED that the most recent catches (41,760 t in 2015) were 2,360 t above the MSY level (39,400 t). Hence the WPB RECOMMENDED that catches for swordfish in 2017 should be less than MSY and REQUESTED that the IOTC Secretariat update the draft stock status summary for swordfish with the latest 2015 catch data, and for the summary to be provided to the SC as part of the draft Executive Summary for its consideration	SC19.15	Swordfish habitat and behavior (para. 51) The SC RECOMMENDED that, for subsequent WPB meetings, swordfish is treated as a single stock and that references related to swordfish for the southwest Indian Ocean are removed from the Executive Summary and from the summary of available data for all billfish species.	Update: [Completed] Starting from WPB14 the Swordfish is treated as a single stock.
WPB14-08	Revision of the WPB Program of work (2017–2021) (para. 178): The WPB RECOMMENDED that more support is provided for the implementation of the ROS for	SC19	Program of Work (2017–2021) The SC NOTED paper IOTC-2016-SC19-14 that presented a first draft of a proposal for a pilot project for	Update: The Commission noted the presentation on the pilot project given

WPB14-09	<p>fleets catching the majority of the billfish species (i.e. the gillnet fleets).</p> <p>(para. 180): The WPB RECOMMENDED that the SC consider and endorse the WPB Program of Work (2017–2021), as provided at Appendix XI.</p>	<p>Para. 156-157</p> <p>SC19 Para. 170</p>	<p>the ROS under Resolution 16/04.</p> <p>The SC NOTED that the work elements described in the project proposal are critical to the future success of the ROS and AGREED to use the strategic framework described in the paper. The SC further REQUESTED the Secretariat, in collaboration with the SC Chair and WPEB Chair, develop a more detailed and specific pilot program covering the actions mentioned in Res 16/04. This will include a detailed budget and will be circulated among CPCs for comment as detailed in Res 16/04. The SC AGREED to present the final version of the pilot project to the Commission as required by Res 16/04.</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 XXXIVa-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>by the Chair of the Scientific Committee and ENDORSED the framework as outlined in IOTC-2017-S21-10.</p> <p>Furthermore the Commission accepted that the Project Steering Committee will be required to advise the Secretariat on a range of critical matters relating to the implementation of the project.</p> <p>The Commission encouraged CPCs, especially those that are likely to be participating in and benefitting directly from the project, to support the initiative further with co-funding. The Commission also AGREED that project activities would begin with the current funding available and that a budget for subsequent phases be prepared for the S22.</p> <p>The Commission REQUESTED nominations from members that want to participate in the Pilot Project Steering Committee to be sent to the Secretariat.</p> <p>Update: Completed</p>
WPB14.10	<p><i>Review of the draft, and adoption of the Report of the 14th Session of the Working Party on Billfish</i></p> <p>(para. 188): The WPB RECOMMENDED that the Scientific Committee consider the consolidated set of recommendations arising from WPB14, provided at</p>	SC19.02	<p><i>Review of the draft, and adoption of the Report of the 14th Session of the Working Party on Billfish</i></p> <p>(para. 144) The SC RECOMMENDED that the Commission note the management advice developed for each billfish species under the IOTC mandate, as provided</p>	Update: Completed

[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 2016 ([Fig. 8](#)):

- 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](#)

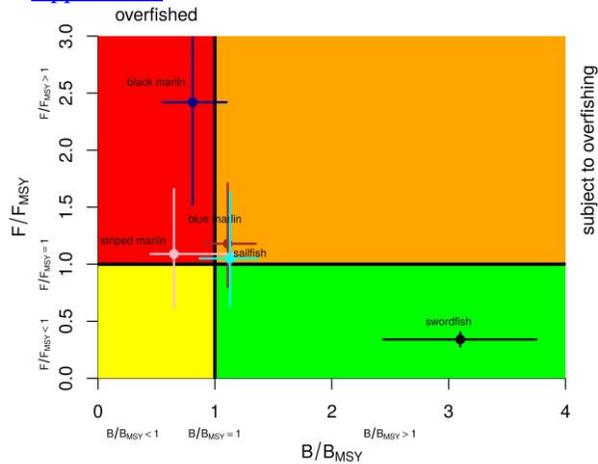


Fig. 8. Combined Kobe plot for swordfish (black), indo-pacific sailfish (cyan), black marlin (light blue), blue marlin (brown) and striped marlin (pink) showing the 2015 and 2016 estimates of current stock size (SB or B, species assessment dependent) and current fishing mortality (F) in relation to optimal spawning stock size and optimal fishing mortality. Cross bars illustrate the range of uncertainty from the model runs.

in the Executive Summary for each species, and the combined Kobe plot for the three species assigned a stock status in 2016 ([Fig. 5](#)):

- Swordfish (*Xiphias gladius*) – [Appendix XII](#)
 - Black marlin (*Makaira indica*) – [Appendix XIII](#)
 - Blue marlin (*Makaira nigricans*) – [Appendix XIV](#)
 - Striped marlin (*Tetrapturus audax*) – [Appendix XV](#)
- Indo-Pacific sailfish (*Istiophorus platypterus*) – [Appendix XVI](#)

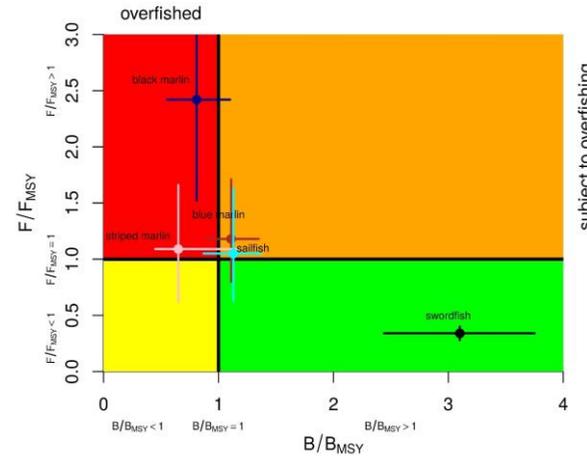


Fig. 5. Combined Kobe plot for swordfish (black), Indo-pacific sailfish (cyan), black marlin (light blue), blue marlin (brown) and striped marlin (pink) showing the 2015 and 2016 estimates of current stock size (SB or B, species assessment dependent) and current fishing mortality (F) in relation to optimal spawning stock size and optimal fishing mortality. Cross bars illustrate the range of uncertainty from the model runs.

WPB14 Report	WPB14 REQUESTS	Update/Progress
Para. 20	<i>Billfish species identification</i>	Update: Ongoing Based on the implementation results of phase 1 of the Sports Fishery project - and on the availability of new funding sources - Mozambique could be considered

	The WPB NOTED Seychelles, Mauritius, La Reunion and Kenya as countries included in the sports fishery data collection protocols project and REQUESTED that Mozambique is included as a priority country for a potential second phase, given the importance of its sports fisheries for billfish.	as a priority country for inclusion in phase 2.
Para. 22	The WBP THANKED WWF-Mozambique for having completed the translation of species identification cards and REQUESTED that the final copies are sent to the IOTC Secretariat as soon as possible.	Update: [Pending]
Para. 23	The WPB CONGRATULATED Sri Lanka (NARA) for completing the Sinhalese/Tamil translations for the IOTC billfish species identification guides and REQUESTED the finalised draft is sent to the IOTC Secretariat for printing.	Update: [Pending]
Para. 25	<p>Meeting participation fund</p> <p>The WPB RECALLED the recommendation from WPB13, reiterated at the SC:</p> <p><i>Para. 98. The SC RECOMMENDED that the IOTC Rules of Procedure (2014), for the administration of the Meeting Participation Fund be modified so that applications are due not later than 60 days, and that the full Draft paper be submitted no later than 45 days before the start of the relevant meeting. The aim is to allow the Selection Panel to review the full paper rather than just the abstract, and provide guidance on areas for improvement, as well as the suitability of the application to receive funding using the IOTC MPF. The earlier submission dates would also assist with Visa application procedures for candidates.</i></p> <p>and REQUESTED that the Rules of Procedure are updated to include the revised deadlines so that a draft can be presented to the S21 for approval in 2017.</p>	Update: [Pending] The Rules of Procedure were not updated at the S21 meeting as no delegation proposed an amendment. This will remain pending until a delegation proposes a revision to the deadlines.
Para. 27	<p>Review of the statistical data available for billfish</p> <p>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.</p>	Update: [Ongoing] A number of countries have measurably progressed in improving the quality of the reported billfish data (namely, Sri Lanka and Mozambique). Out of the most relevant countries and fisheries in the region, still no change in quality and completeness for what concerns Indonesia (coastal fishery) and Pakistan (coastal / offshore fisheries) data. For further details, see also document IOTC-2017-WPB15-07
Para. 29	<p>I.R.Iran billfish fishery</p> <p>I.R. Iran ACKNOWLEDGED the importance of billfish catches from their fisheries and the lack of complete data submissions to the Secretariat, adding that data are collected from separate centres and that the process of collating and aggregating information to provide complete catch-and-effort estimates is complex. The WPB NOTED the importance of the Iranian fisheries statistics that could be used in the future for billfish assessment. However, the lack of catch-and-effort data for the</p>	Update: [Ongoing] A data compliance mission to Iran is scheduled by late September 2017, following the WPB15.

	Iranian driftnet fishery compromises estimates of total catch, as the species composition of marlins would vary depending on the areas and times fished. Thus, the WPB REQUESTED that the I.R. Iran work with the IOTC Secretariat to make every possible effort to assess the areas and times fished by its fishery and to report this information to the next meeting of the WPB, NOTING that this is already a mandatory reporting requirement under Resolution 15/02.	
Para. 48	<i>Kenyan sports fishery</i> The WPB REQUESTED that the catch-and-effort data for the sports fishery in Kenya from 1987–2010 be submitted to the IOTC Secretariat to assist in future assessments for sports fishery species.	Update: [Ongoing] A data compliance mission to Kenya is scheduled by the beginning of September as part of the Sports Fishery project follow-up missions.
Para. 49	<i>African Billfish Foundation</i> RECALLING the excellent efforts being undertaken by the African Billfish Foundation to develop a tag and recapture database in Kenya and Tanzania, the WPB REQUESTED that the African Billfish Foundation continue its important work, particularly in the areas of collaborative research aimed at obtaining more information on movements of billfishes, via both conventional and archival tagging programs that will allow the collection of information on both horizontal and vertical movements as well as on population dynamics.	Update: [Ongoing] The ABF has extended the tag and recapture database to Oman, Mozambique, Madagascar and South Africa while at the same time deploying satellite tagging in collaboration with IGFA (International Game Fish Association). Data collected so far has been effectively used to improve the understanding of billfish movements and dynamics and are supposed to be in the public domain.
Para. 59	<i>Malaysia billfish fishery</i> NOTING the issues related to correct species identification, the WPB THANKED Malaysia for the offer to translate the IOTC species identification guides into Bahasa Malay and REQUESTED that these translations are provided to the IOTC Secretariat.	Update: [Pending]
Para. 73	<i>Nominal and standardized CPUE indices - swordfish</i> NOTING that swordfish was not a priority species in 2016 (it will be assessed in 2017 as per the Program of Work - see Appendix XI), no updated CPUE indices were submitted for consideration by the WPB in 2016. However, the WPB REQUESTED that key CPCs (Taiwan,China, Sri Lanka, Indonesia, Japan, EU,Portugal, EU,Spain and EU,France) provide updated CPUE indices as indicators of stock status between stock assessment years.	Update: [Pending] Standardized CPUEs have been submitted by Taiwan,China, Indonesia, Japan, EU,Portugal, EU,Spain and EU,France (Reunion, yet to be provided).
Para 76	<i>Development of management advice for swordfish& update of swordfish Executive Summary for the consideration of the Scientific Committee</i> At the same time, the WPB NOTED that the most recent catches (41,760 t in 2015) were 2,360 t above the MSY level (39,400 t). Hence the WPB RECOMMENDED that catches for swordfish in 2017 should be less than MSY and REQUESTED that the IOTC Secretariat update the draft stock status summary for swordfish with the latest 2015 catch data, and for the summary to be provided to the SC as part of the draft Executive Summary for its consideration: <ul style="list-style-type: none"> • Swordfish (<i>Xiphias gladius</i>) – Appendix VI 	Update: [Completed]

Para. 82	<p>Billfish bycatch in France purse-seine fishery</p> <p>ACKNOWLEDGING the absence of landings of billfish in the French purse-seine fishery, the WPB REQUESTED that the authors provide retained billfish data (for crew consumption) to the IOTC Secretariat, given that they are likely to be the best and possibly only available estimates of nominal catches of billfish by the fleet. The WPB also NOTED that French purse-seiners have already been reporting, in the last two years, <i>dead</i> discard information for all species.</p>	Update: Pending The standard IOTC form for Nominal Catch data reporting has been amended to also include information about the type of catch (of which “For crew consumption” is an example) but has yet to be disseminated. So far, no catches of types other than “Retained for landing” have been received, not even from those fleets and fisheries for which other components are known.
Para. 87	<p>Japan longline CPUE</p> <p>ACKNOWLEDGING that the sharp increase in the first CPUE series during the 1980s is a consequence of the transition from shallow set gear types to deeper gears the WPB REQUESTED the authors explore the effects of dropping a few years of data from this transition phase.</p>	Update: Pending
Para. 89	<p>The WPB NOTED that it is surprising that the gear effect is significant for black marlin but not for blue marlin, despite the similar ecology of the two species and REQUESTED the authors to further investigate and provide a possible explanation.</p>	Update: Pending
Para. 97	<p>Indonesia longline CPUE</p> <p>The WPB NOTED the large number of positive catches in area D, which might be better explained by the inclusion of environmental variables in the model, and REQUESTED the authors investigate this further</p>	Update: Pending
Para. 120	<p>Blue marlin: Summary of stock assessment models in 2016</p> <p>The WPB NOTED the steepness parameter used for the base case model run ($h=0.87$) has been taken from the Pacific whereas the basic information on biology is limited for this stock and this value might be too high. The WPB REQUESTED that additional and alternative information on the biology is further explored prior to the next meeting</p>	Update: Pending
Para. 143	<p>Striped marlin</p> <p>The WPB ADOPTED the management advice developed for each marlin species as provided in the draft resource stock status summaries and REQUESTED that the IOTC Secretariat update the draft stock status summaries for each marlin species with the latest 2015 catch data (if necessary), and for the summaries to be provided to the Scientific Committee as part of the draft Executive Summary, for its consideration:</p> <ul style="list-style-type: none"> • Black marlin (<i>Makaira indica</i>) – Appendix VII • Blue marlin (<i>Makaira nigricans</i>) – Appendix VIII • Striped marlin (<i>Tetrapturus audax</i>) – Appendix IX 	Update: Completed
Para. 169	<p>Development of management advice for sailfish and update of sailfish species Executive Summaries for the consideration of the Scientific Committee</p>	Update: Completed

	<p>The WPB ADOPTED the management advice developed for Indo-Pacific sailfish (<i>Istiophorus platypterus</i>), as provided in the draft resource stock status summary and REQUESTED that the IOTC Secretariat update the draft stock status summary for Indo-Pacific sailfish with the latest 2015 catch data (if appropriate), and for the summary to be provided to the Scientific Committee as part of the draft Executive Summary, for its consideration:</p> <ul style="list-style-type: none"> • Indo-Pacific sailfish (<i>Istiophorus platypterus</i>) – Appendix X 	
Para. 186	<p><i>Date and place of the 15th and 16th Sessions of the Working Party on Billfish</i></p> <p>The WPB AGREED on the importance of having IOTC working party meetings within key CPCs catching species of relevance to the working party, in this case on billfish. Following a discussion on who would host the 15th and 16th sessions of the WPB in 2017 and 2018 respectively, the WPB REQUESTED that the IOTC Secretariat will later identify candidate CPCs to determine if they would be able to host the 15th / 16th Sessions. The WPB should continue to be held in conjunction with the Working Party on Ecosystems and Bycatch: the meeting locations will be communicated by the IOTC Secretariat to the SC for its consideration at its next session to be held in December 2016 (Table 17).</p>	<p>Update: Completed</p> <p>The 15th Session of the Working Party on Billfish will be held in San Sebastian, Spain from 10-14 September 2017.</p>