
OUTCOMES OF THE 19th SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY: IOTC SECRETARIAT¹, 20 SEPTEMBER 2017

PURPOSE

To inform participants at the 8th Working Party on Methods (WPM08) of the recommendations arising from the 19th Session of the Scientific Committee (SC19) held in December 2016, specifically relating to the work of the WPM.

BACKGROUND

At the 19th Session of the SC, the SC noted and considered the recommendations made by the WPM in 2016 that included updates on the MSE process for various IOTC species.

Based on the recommendations arising from the WPM07, the SC19 adopted a set of recommendations, provide at Appendix A of this paper.

The recommendations contained in Appendix A were provided to the Commission for consideration at its 21st Session held in May 2017. A separate paper, IOTC–2017–WPM08–04 addresses the responses and actions of the Commission.

In addition, the SC19 reviewed and endorsed a Program of Work for the WPM, including a revised MSE schedule, as detailed in Appendix B and Appendix C respectively. A separate paper (IOTC–2017–WPM08–07) 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, Appendix B and Appendix C, the following extracts (paras. 97 to 107) from the SC19 Report (IOTC–2016–SC19–R) are provided here for the consideration and action of the WPM08:

Report of the 7th Session of the Working Party on Methods (WPM07)

The SC **NOTED** the report of the 7th Session of the Working Party on Methods (IOTC–2016–WPM07–R), including the consolidated list of recommendations provided as an appendix to the report. The meeting was attended by 34 participants (26 in 2015), including 9 recipients of the MPF (6 in 2016).

The SC **CONGRATULATED** the WPM and the new Chairperson, Dr Toshi Kitakado, for the progress made on MSE for yellowfin tuna, bigeye tuna and albacore.

7.6.1 Presentation and evaluation of MSE results

The SC **ENDORSED** the revised list of performance statistics representing a suite of candidate management objectives, provided in Appendix VIa which provides a means of measuring the performance of alternative management procedures against different objectives.

The SC **RECOMMENDED** the proposed standardised methods for the presentation of MSE results (Appendix VIb) are submitted to TCMP and S21 for discussion, revision and endorsement, as appropriate. Subsequently, this should be considered a living document that will benefit from revision based upon feedback received from the TCMP, which will first meet in 2017.

7.6.2 Operational definition of TRPs and LRPs

The SC **NOTED** the request for advice on the feasibility of reporting stock status in relation to limit reference points in addition to the target reference points currently used:

“The Commission **NOTED** the progress towards development of harvest strategies for key stocks, including the adoption of limit and target reference points for a number of stocks, and **REQUESTED** that the SC provide advice to the 21st Session of the IOTC on the feasibility of reporting stock status in relation to the agreed limit reference

¹ secretariat@iote.org

points” (IOTC-2016-S20-R, para. 162).

The SC **NOTED** that if stock status advice changes as soon as the target reference points are exceeded, it is likely for advice to change based purely on natural fluctuations in stock abundance or other expected sources of variability. The SC **RECOMMENDED** that the operational definition of TRPs and LRPs is included for discussion at the Technical Committee on Management Procedures.

7.6.3 *Revision of the WPM Program of work (2017–2021)*

The SC **NOTED** that the next stock assessment of Indian Ocean swordfish is due to take place in 2017 and **RECOMMENDED** that the development of MSE of swordfish is considered as a high priority in the revised WPM Program of Work and that funding is allocated for this activity, to start the conditioning of an OM for this stock.

The SC **NOTED** the very ambitious schedule of work and need for prioritisation as far as possible within the timeline established by the Commission in Resolution 15/10.

7.6.4 *Special session on Management Strategy Evaluation (MSE)*

The SC **NOTED** that a special session on Management Strategy Evaluation took place during the SC meeting, following a request from the Working Party on Methods in 2015. A presentation on Management Procedures and their evaluation and comparison through MSE explained the steps involved in this process and the roles of scientists and managers.

The SC **THANKED** the demonstrators for their work and agreed that there is a need for this kind of effort to help members understand the details and progress of the work on Management Strategy Evaluation.

The SC **NOTED** that the MSE examples were based on the monitoring of catch limits whereas there are also other management mechanisms available such as input controls that might be preferable to managers. However, while these are theoretically possible to be incorporated within the MSE framework, limited knowledge of the spatial distribution and actual effort exerted by the fleets restricts the ability to explore these management measures in a meaningful way, through an operating model.

The SC **NOTED** that status quo scenarios should be included within management advice to enable them to evaluate the impacts of a lack of decision, prolonged indecision as well as results from different decisions.

RECOMMENDATION

That the WPM:

- 1) **NOTE** paper IOTC–2017–WPM08–03 which outlined the main outcomes of the 19th Session of the Scientific Committee, specifically related to the work of the WPM.
- 2) **CONSIDER** how best to progress these issues at the present meeting.

APPENDICES

Appendix A: Consolidated set of recommendations of the 19th Session of the Scientific Committee (November 2016) to the Commission, relevant to the Working Party on Methods.

Appendix B: Program of Work (2017–2021) for the IOTC Working Party on Methods (WPM).

Appendix C: Schedule of MSE for the WPM (2017–2021).

² Provisional until approval of the final version of the S20 report by correspondence.

APPENDIX A

CONSOLIDATED SET OF RECOMMENDATIONS OF THE 19TH SESSION OF THE SCIENTIFIC COMMITTEE (23–27 NOVEMBER 2016) TO THE COMMISSION RELEVANT TO THE WORKING PARTY ON METHODS

*Extract of the Report of the 19th Session of the Scientific Committee
(IOTC-2016-SC19-R; Appendix XXXVII, Pages 207–216)*

GENERAL RECOMMENDATIONS TO THE COMMISSION

Report of the 7th Session of the Working Party on Methods (WPM07)

Presentation and evaluation of MSE results

SC19.28 ([para. 100](#)) The SC **RECOMMENDED** the proposed standardised methods for the presentation of MSE results ([Appendix IX](#)) are submitted to TCMP and S21 for discussion, revision and endorsement, as appropriate. Subsequently, this should be considered a living document that will benefit from revision based upon feedback received from the TCMP, which will first meet in 2017.

Operational definition of TRPs and LRPs

SC19.29 ([para. 101](#)) The SC **NOTED** the request for advice on the feasibility of reporting stock status in relation to limit reference points in addition to the target reference points currently used:

*“The Commission **NOTED** the progress towards development of harvest strategies for key stocks, including the adoption of limit and target reference points for a number of stocks, and **REQUESTED** that the SC provide advice to the 21st Session of the IOTC on the feasibility of reporting stock status in relation to the agreed limit reference points” (IOTC-2016-S20-R, para. 16).*

The SC **NOTED** that if stock status advice changes as soon as the target reference points are exceeded, it is likely for advice to change based purely on natural fluctuations in stock abundance or other expected sources of variability. The SC **RECOMMENDED** that the operational definition of TRPs and LRPs is included for discussion at the Technical Committee on Management Procedures.

Revision of the WPM Program of work (2017–2021)

SC19.30 ([para. 102](#)) SC **NOTED** that the next stock assessment of Indian Ocean swordfish is due to take place in 2017 and **RECOMMENDED** that the development of MSE of swordfish is considered as a high priority in the revised WPM Program of Work and that funding is allocated for this activity, to start the conditioning of an OM for this stock.

Summary discussion of matters common to Working Parties (capacity building activities – stock assessment course; connecting science and management, etc.)

Data collection and capacity building

SC19.34 ([para. 121](#)) The SC **AGREED** that, while external funding is helping the work of the Commission, funds allocated by the Commission to capacity building are still too low, considering the range of issues identified by the SC and its Working Parties, particularly in relation to the implementation of the Regional Observer Scheme and data collection and reporting for artisanal fisheries and **RECOMMENDED** that the Commission further increases the IOTC Capacity Building budget to fund these activities in the future.

Meeting participation fund

SC19.35 ([para. 123](#)) The SC reiterated its **RECOMMENDATION** 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.

IOTC species identification guides: Tuna and tuna-like species

SC19.36 ([para. 124](#)) The SC **RECOMMENDED** 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 CPCs scientific observers, both on board and port, still do not have smart phone technology/hardware access and need to have hard copies on board.

IOTC Secretariat staffing

SC19.37 ([para. 126](#)) **NOTING** the very heavy workload at the IOTC Secretariat and the ever increasing demands by the Commission and the Scientific Committee, and also the capacity to respond to requests for assistance by countries, the SC **RECOMMENDED** that the recommendation from the Performance Review PRIOTC02.07(g) is implemented, and that permanent staff of the IOTC Data and Science Section be increased by two (2) (1 x P4 and 1 x P3 level positions), supplemented by additional short-term consultants, to commence work by 1 January 2018 or earlier, and that funding for these new positions should come from both the IOTC regular budget and from external sources to reduce the financial burden on the IOTC membership.

Collaborative Longline CPUE

SC19.38 ([para. 127](#)) The SC **ACKNOWLEDGED** the work of the WPTT and WPTmT and especially improvements in the joint CPUE standardization work which is critical for reliably estimating the stocks. The SC **NOTED** that the joint CPUE has become a critical component for the assessments of temperate and tropical tuna species and the SC **RECOMMENDED** that this work continue under the current framework, but that plans should be developed to formalize the process within the IOTC in the near future.

Chairpersons and Vice-Chairpersons of the SC and its subsidiary bodies

SC19.39 ([para. 128](#)) 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 VII](#).

Implementation of the Regional Observer Scheme***Development of a proposal for a Pilot Project to be presented to the Commission 2017***

SC19.40 ([para. 160](#)) The SC **NOTED** the substantial resourcing that the proposed framework will require and **RECOMMENDED** that the Commission provide adequate resources to enable implementation of the project.

Progress on the Implementation of the Recommendations of the Second Performance Review Panel

SC19.41 ([para. 168](#)) The SC **RECOMMENDED** that the Commission note the updates on progress regarding Resolution 16/03, as provided at [Appendix XXXIII](#).

Program of work and schedule of Working Party and Scientific Committee meetings***Consultants***

SC19.42 ([para. 179](#)) **NOTING** the highly beneficial and relevant work done by IOTC stock assessment consultants in 2016 and 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. The draft budget provided in [Table 5](#), shall be incorporated into the overall IOTC Science budget for the consideration of the Commission.

Consideration of Resolution 15/09 On a fish aggregating devices (FADs) working group

SC19.43 ([para. 185](#)) The SC further **NOTED** that the intention of this is to hold a dialogue meeting between Commissioners as well as scientists and **RECOMMENDED** that the Commission consider holding an internal IOTC meeting in early 2017 in advance of the global meeting.

APPENDIX B
PROGRAM OF WORK (2017–2021) FOR THE SCIENTIFIC COMMITTEE AND ITS SUBSIDIARY BODIES

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. (IOTC-2016-SC19-R, Para. 170)

Working Party on Methods (WPM)

(Extracts from IOTC-2016-SC19-R: Appendix XXXIV)

Table 1. Priority topics for obtaining the information necessary to deliver the necessary advice to the Commission. Resolution 15/10 elements have been incorporated as required by the Commission.

Topic	Sub-topic and project	Research Priority	Funding Priority	Lead	Est. budget (potential source)	Timing				
						2017	2018	2019	2020	2021
1. Management Strategy Evaluation	1.1 Albacore	High	5	EU (JRC)	Funded (EC JRC)					
	1.1.1 Revision of Operating Models based on WPM and SC feedback, including possible robustness tests									
	1.1.2 Implementation of initial set of simulation runs and results									
	1.1.3 Revision of Management Procedures and Indicators after presentation of initial set to TCMP and Commission									
	1.1.4 Evaluation of new set of Management Procedures (if required)									
	1.2 Skipjack tuna	High	2	Maldives						
	1.2.1 Review of model implementation and participation in MSE process					?? (TBD)				
	1.3 Bigeye tuna	High	4	Australia (CSIRO)	\$75,000 (ABNJ)					
1.3.1 Update OM & present preliminary MP results to TCMP, WPTT/WPM review of new OM										

	1.3.2 Present revised MP results to TCMP with target adoption date of 2018; iteratively update development if required)				\$?? (TBD)					
	1.4 Yellowfin tuna	High	3	Australia (CSIRO)	\$75,000 (ABNJ)					
	1.4.1 Update OM & present preliminary MP results to TCMP, WPTT/WPM review of new OM				\$??					
	1.4.2 Present revised MP results to TCMP with target adoption date of 2018; iteratively update development if required)				(TBD)					
	1.5 Swordfish	High	1	TBD	\$?? (TBD)					
	1.5.1 Initial OM									
	1.5.2 Conditioning and OM set up									
	1.5.3 Generic MP tests									
	1.5.4 Final Model with MPs									
2. Tier approach for providing stock status advice	2.1 Develop a 'Tier' approach for providing stock status advice, based on the type of indicators used to determine stock status (e.g. CPUE series, stock assessment model)	Medium	6	Consult.						
	2.2 Review of current practices and recommendation for the consideration at WPM08 and SC20.				\$10,000 (TBD)					
3. Multiple stock status derived from different model structures	3.1 Develop specific guidance for the most appropriate models to be used or how to synthesize the results when multiple stock assessment models are presented. (<i>see IOTC-2016-WPTT18-R, para.91</i>)	Medium	7		\$?? (TBD)					

APPENDIX C
**SCHEDULE OF STOCK ASSESSMENTS FOR IOTC SPECIES AND SPECIES OF INTEREST FROM
2016–2020, AND FOR OTHER WORKING PARTY PRIORITIES**

The SC **ADOPTED** a revised assessment schedule, ecological risk assessment and other core projects for 2016–20, for the tuna and tuna-like species under the IOTC mandate, as well as the current list of key shark species of interest, as outlined in Appendix XXXV (IOTC–2016–SC18–R, Para. 177)

The SC **NOTED** that the WPM has selected five species for MSE (albacore, yellowfin, bigeye, skipjack and swordfish). While these species are equally prioritised in terms of science, swordfish has been labelled as the first priority given that it is the only species currently lacking funding.

The SC **NOTED** information paper IOTC-2016-SC19-INF04 that outlines a proposed schedule of work for the development of management procedures in the IOTC.

This paper was presented to the Technical Committee on Management Procedures (TCMP) and Commission meeting (S21) and the proposed schedule was adopted.

At the 21st session of the Commission:

Schedule of work for the development of management procedures for key species in the IOTC Area

(Para. 58): The Commission noted the presentation by Australia on the schedule of work for the development of management procedures for key species in the IOTC Area (IOTC-2017-S21-14). The schedule provides information on when and how the Commission ought to be engaged in the management procedures process, and was developed with inputs from CPC's, relevant IOTC working parties, the Scientific Committee, and uses, as its basis, the work plan of the Scientific Committee.

*(Para. 59): The Commission **ENDORSED** the schedule that was revised during S21 (provided in Appendix 9), noting it is a 'living document' to guide the work of the Commission and its subsidiary bodies in the future. The Commission also **REQUESTED** that a budget for implementation of the schedule be reviewed by the SCAF in 2018.*

The proposed schedule is available in IOTC-2017-WPM08-04 as Appendix B: Schedule of Work for TCMP (Schedule of work for the development of management procedures for key species in the IOTC area)