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## REVISION OF THE WPM PROGRAM OF WORK (2019–2023)

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### PURPOSE

To ensure that participants at the 8<sup>th</sup> Working Party on Methods (WPM09) revise the Program of Work for the WPM by taking into consideration the specific requests of the Commission and Scientific Committee.

### BACKGROUND

#### *Scientific Committee*

At the 20<sup>th</sup> Session of the SC:

- (Para. 203) *The SC noted paper IOTC–2017–SC20–09 which provided the Scientific Committee (SC) with a proposed Program of Work for each of its Working Parties (WP), including prioritisation of the elements requested by each WP.*
- (Para. 204) *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 XXXVIa-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.*
- (Para. 206) *The SC **AGREED** on the consolidated table of priorities across all Working Parties, as developed by each WP Chair, and **REQUESTED** that the IOTC Secretariat, in consultation with the Chair and vice-Chair of the SC and relevant Working Parties, develop ToRs for the specific projects to be carried out (Table 4).*
- (Para. 208) *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 in Table 4 given that it is the only species currently lacking funding.*

#### *Commission*

At Sessions of the Commission, Conservation and Management Measures adopted contained elements that call on the Scientific Committee, via the WPM, to undertake specific tasks. These requests will need to be incorporated into a revised Program of Work for the WPM.

At the 22<sup>nd</sup> session of the Commission:

#### **Report of the 2<sup>nd</sup> Session of the Technical Committee on Management Procedures (TCMP02)**

(Para. 74): *The Commission **NOTED** that the Harvest Control Rule was implemented for skipjack tuna through Resolution 16/02 and **ENCOURAGED** CPCs to begin to develop management proposals for other IOTC species that are based on TCMP outputs and advice once the results of the current MSE analyses are reviewed and endorsed.*

### DISCUSSION

Participants at the WPM09 are requested to consider the priorities set by the Commission and the Scientific Committee, via Conservation and Management Measures, and revise its Program of Work (previously outlined in paper IOTC–2018–WPM09–03) to match those priorities.

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**RECOMMENDATION/S**

That the WPM:

- 1) **NOTE** paper IOTC–2018–WPM09–07, which encouraged the WPM to further develop and refine its Program of Work for 2019–2023 to align with the requests and directives from the Commission and Scientific Committee.
- 2) **RECOMMEND** a revised Program of Work for 2019–2023 to the Scientific Committee for its consideration and potential endorsement.
- 3) **NOTE** Appendix B (Schedule of work for the development of management procedures for key species in the IOTC area) that has been **ENDORSED** by the Commission at the 21<sup>st</sup> session in 2017.

**APPENDICES**

**Appendix A:** DRAFT: Working Party on Methods Program of Work (2019–2023)

**Appendix B:** Schedule of work for the development of management procedures for key species in the IOTC area.

**APPENDIX A**  
**WORKING PARTY ON METHODS PROGRAM OF WORK (2019–2023)**

The Program of Work consists of the following, noting that a timeline for implementation would be developed by the SC once it has agreed to the priority projects across all of its Working Parties:

**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				
						2019	2020	2021	2022	2023
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 External peer review (2018 or date TBD)					US\$15,000				
	1.1.5 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				US\$75,000 (EC)					
	1.3 Bigeye tuna	High	4							

1.3.1	Update OM & present preliminary MP results to TCMP, WPTT/WPM review of new OM			Australia (CSIRO)	\$75,000 (ABNJ/CSIRO)					
1.3.2	External peer review (2018 or date TBC)				US\$15,000					
1.3.3	Present revised MP results to TCMP with target adoption date of 2019				\$30,000 (Jan - Jun 2018)					
1.3.4	Additional iterations if required				(TBD)					
1.4	Yellowfin tuna	High	3							
1.4.1	Update OM & present preliminary MP results to TCMP, WPTT/WPM review of new OM			Australia (CSIRO)	Funded to Dec 2018 (ABNJ/CSIRO)					
1.4.2	External peer review (2018 or date TBD)				US\$15,000					
1.4.3	Present revised MP results to TCMP with target adoption date of 2018; iteratively update development if required)				US\$30,000 (Jan-Jun 2018)					
1.4.4	additional iterations if required				(TBD)					
1.5	Swordfish	High	1	TBD	USD\$2,500 (EC)					
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									
1.5.5	External peer review				US\$15,000					
2. Presentation of stock status advice for data limited stocks	2.1 Explore potential methods of presenting stock status advice to managers from a range of data limited scenarios, e.g. through the development of a 'Tier' approach for providing stock status advice,	Medium	7	Consult.						

	based on the type of indicators used to determine stock status (e.g. CPUE series, stock assessment model)						
			US\$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	6	\$?? (TBD)			

**Table 2.** Management Strategy Evaluation schedule for the IOTC Working Party on Methods (WPM) 2019-2023

Species	2018	2019	2020	2021	2022	2023
<i>Working Party On Methods</i>						
Albacore			Technical Guidance on MSE development			
Skipjack tuna			Technical Guidance on MSE development			
Bigeye tuna			Technical Guidance on MSE development			
Yellowfin tuna			Technical Guidance on MSE development			
Swordfish			Technical Guidance on MSE development			

Note: the assessment schedule may be changed dependant on the annual review of fishery indicators, or SC and Commission requests. ALB: albacore; BET: bigeye tuna; YFT: yellowfin tuna; SKJ: skipjack tuna.

## APPENDIX B SCHEDULE OF WORK FOR THE TCMP

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

Management procedures (also known as ‘harvest strategies’) are widely acknowledged as being best practice for developing sustainable management measures that achieve agreed objectives for sustainably managing fishery resources. This is reflected in Resolution 15/10, which notes that the objectives of the Commission include ‘*to maintain stocks in perpetuity and with high probability, at levels not less than those capable of producing their maximum sustainable yield*’. Resolution 15/10 also sets out interim limit and target reference points and the Scientific Committee has been instructed to ‘*develop and assess, through the management strategy evaluation process, the performance of harvest control rules to achieve target reference points on average and avoid limit reference points with a high probability*’.

The development of management procedures for key IOTC species is now well underway. However, the process for developing candidate management procedures through the IOTC committees and sub-committees, and the adoption of management procedures by the Commission, is a complex and iterative process that will likely require several rounds of advice, consideration and review.

The 20<sup>th</sup> Session of the IOTC Commission noted the substantial work underway in developing management procedures for IOTC species and requested the development of a work plan reflecting the elements of management procedures to be developed and the roles and responsibilities of the Commission and its subsidiary bodies. To this end, Australia presented this schedule of work to the 7<sup>th</sup> meeting of the Working Party on Methods (IOTC-2016-WPM07-12) and the 19<sup>th</sup> Scientific Committee (IOTC-2016-SC19-INF04) and has revised it to account for feedback provided through those processes.

This schedule of work outlines the process that will need to be followed and the decisions that need to be made to develop management procedures for key IOTC species (at the stock or fishery level) in the IOTC area of competence. It provides a guide for the IOTC committees and sub-committees, as well as the Commission, to understand their roles and responsibilities in the process of developing and adopting management procedures. It also provides indicative timeframes for this work, which may be subject to changes to ensure consistency with the technical work plan implemented by the Scientific Committee, and to consider feedback from the regular dialogue established between scientists and managers through the Technical Committee on Management Procedures. These time frames are drawn from Resolution 15/10 but have been modified to take account of recent delays and shifts in the progression of management procedure development.<sup>2</sup> In this sense, the schedule of work is intended to be a ‘living’ document that the Commission owns and uses (including updating as required) to catalyse, track and confirm its ongoing commitment to the development of management procedures.

#### **References:**

- Resolution 12/01 On the implementation of the precautionary approach
- Resolution 15/10 On target and limit reference points and a decision framework
- Resolution 16/02 On harvest control rules for Skipjack tuna in the IOTC area of competence
- Resolution 16/09 On establishing a Technical Committee on Management Procedures

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<sup>2</sup> Resolution 15/10 provides some guidance on indicative timeframes for the Scientific Committee’s development of management procedures for key IOTC species. Management procedures for albacore and skipjack tuna were requested to be completed in 2015 for presentation to the Commission in 2016, while management procedures for yellowfin tuna, bigeye tuna and swordfish were requested to be completed by 2017 for presentation to the Commission in 2018. A harvest control rule was adopted for skipjack tuna in 2016 (Resolution 16/02). However, the indicative timeframes for completion of management procedures for other species are unlikely to be met due to uncertainty in funding and requisite decision points.

**Schedule of work for the development of management procedures for key species in the IOTC Area.** *A more detailed explanation of the roles of the Working Parties (WPs), Scientific Committee (SC), Technical Committee on Management Procedures (TCMP) and the Commission are provided at Annex 1.*

<b>Year</b>	<b>Albacore</b>	<b>Skipjack</b>	<b>Yellowfin</b>	<b>Bigeye</b>	<b>Swordfish</b>
<b>2017</b>	<p><b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs. Identify issues which might need specific guidance from the Commission, including how to interpret objectives, timelines and acceptable levels of risk.</p>	<p><b>WPs/SC:</b> Apply HCR using results from 2017 stock assessment to calculate the total annual catch limit. Secretariat to advise CPCs of catch limit.</p>	<p><b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs. Identify issues which might need specific guidance from the Commission, including how to interpret objectives, timelines and acceptable levels of risk.</p>	<p><b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs. Identify issues which might need specific guidance from the Commission, including how to interpret objectives, timelines and acceptable levels of risk.</p>	<p><b>WPs/SC:</b> Develop framework and seek funding for MSE. Advise TCMP and Commission on progress</p>
<b>2018</b>	<p><b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives</p> <p><b>Commission:</b> 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><b>WPs/SC:</b> Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs</p>	<p><b>TCMP:</b> Provide advice to the Commission on any outstanding issues resulting from the application of the HCR if required</p> <p><b>Commission:</b> Provide direction to the WPs/SC on the need to refine the HCR and/or MSE</p> <p><b>WPs/SC:</b> Consider recommendations from the Commission and further refine the HCR through MSE as directed</p>	<p><b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives</p> <p><b>Commission:</b> 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><b>WPs/SC:</b> Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs</p>	<p><b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives</p> <p><b>Commission:</b> 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><b>WPs/SC:</b> Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs</p>	<p><b>WPs/SC:</b> Develop initial operating model and undertake MSE to provide initial advice on the performance of candidate MPs. Identify issues which might need specific guidance from the Commission, including how to interpret</p>



					objectives, timelines and acceptable levels of risk.
2019	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives	<b>TCMP:</b> Provide advice to Commission on any outstanding issues resulting from the application of the HCR if required	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives
2019	<b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or alternative MPs <b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs	<b>Commission:</b> Consider work and advice from subsidiary bodies and review Resolution 16/02.	<b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or alternative MPs <b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs	<b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or alternative MPs <b>WPs/SC:</b> Undertake MSE and provide advice on the performance of candidate MPs	<b>Commission:</b> 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 <b>WPs/SC:</b> Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs
2020	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives <b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or		<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives <b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or	<b>TCMP:</b> Provide advice to Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives <b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or	<b>TCMP:</b> Provide advice to the Commission on elements of candidate MPs that require a decision by the Commission, including the performance of candidate MPs against Commission objectives <b>Commission:</b> Consider work and advice from subsidiary bodies. Decision and adoption of an MP <u>or</u> provide direction to the WPs/SC on the need for further MSE of candidate or

alternative MPs until an MP is adopted.		alternative MPs until an MP is adopted.	alternative MPs until an MP is adopted.	alternative MPs until an MP is adopted.
	<b>WPs/SC:</b> Apply HCR using results from 2020 stock assessment to calculate the total annual catch limit. Secretariat to advise CPCs of catch limit.			<b>WPs/SC:</b> Consider recommendations from the Commission and undertake MSE to provide advice on the performance of candidate MPs

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## **Annex 1: Explanation of roles in the development of candidate Management Procedures**

### **Working Parties and Scientific Committee**

The Scientific Committee (SC) and Working Parties (WPs) are responsible for undertaking the technical development of candidate management procedures (MPs), through formal Management Strategy Evaluation (MSE), and providing advice on candidate MPs to the Commission.

The Working Party on Methods (WPM) is the primary WP for the development of candidate MPs, but other WPs, such as the Working Party on Tropical Tuna (WPTT), Working Party on Temperate Tuna (WPTmT) and the Working Party on Billfish (WPB), may also contribute to MP development for relevant species. The Working Party on Data Collection and Statistics (WPDCS) is responsible for reviewing the quality of available fisheries data and statistics that underpin the development of MPs.

#### *'Undertake MSE'*

- This involves developing operating models and evaluating the performance of candidate management procedures, which include harvest control rules and the pre-specification of data inputs and analyses, against the Commission's objectives.

#### *'Identify issues which might need specific guidance from the Commission'*

- This involves the Scientific Committee requesting clarification from the Commission on how to translate qualitative provisions in some Resolutions, such as acceptable timelines or agreed levels of probability related to achieving management objectives. Similarly, questions about the types of input or output management measures to be considered, as well as acceptable year-to-year fluctuations in expected catches, might be raised for discussion during TCMP meetings and for possible decision by the Commission.

#### *'Provide advice on the performance of candidate MPs'*

- This involves using the agreed performance statistics and standardised figures and tables to communicate results from MSE. Advice from the SC and WPs to the Commission also includes advice on the appropriateness of limit reference points (LRP) and target reference points (TRP), as required under Resolution 15/10.

### **Technical Committee on Management Procedures**

Resolution 16/09 states that the objectives of the Technical Committee on Management Procedures (TCMP) include to *'Enhance the decision making response of the Commission in relation to management procedures, including recommendations made by the Scientific Committee'* and to *'Enhance communication and foster dialogue and mutual understanding between the Scientific Committee and the Commission on matters relating to management procedures'*.

#### *'Provide advice to Commission'*

- This involves assisting the Commission to consider the elements of MPs that require a decision by the Commission, including identifying and evaluating candidate MPs that aim to meet the Commission's objectives.

#### *'On elements of candidate MPs that require a decision by the Commission'*

- Elements of the MPs to be considered include the overarching management objectives, target and limit reference points, harvest control rules, and the performance of MPs against management objectives.

### **Commission**

The Commission is ultimately responsible for guiding the MP process and making decisions on the adoption of MPs, drawing on the advice provided by subsidiary bodies.

#### *'Decision and adoption of an MP'*

- This involves considering a proposed MP, which may take the form of a conservation and management measure proposed by a Commission member, or endorsement of a candidate MP.

#### *'Consider work and advice from subsidiary bodies'*

- This involves the Commission considering advice from the SC and TCMP on the performance of MPs in achieving the Commission's objectives. In making decisions on adopting MPs, the Commission may also seek advice on compliance and implementation issues from the Compliance Committee.

#### *'Provide direction to the WPs/SC on the need for further MSE of candidate or alternative MPs'*

- This involves the Commission providing direction to the SC on the need to further refine candidate MPs or develop new candidate MPs through formal MSE. This advice will in turn assist the Commission in its consideration and adoption of MPs.