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MP Implementation – schedule of activities: meta-rules

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Ann Preece, Ash Williams, Rich Hillary

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Contents

1	Introduction	1
2	Schedule of activities for TAC advice	2
3	Role of MP, OMs, Stock Assessment and Review of MP Performance	2
	Management Procedure (MP)	2
	Operating models (OMs)	3
	Stock Assessment.....	3
	Review of MP performance	3
4	Schedule for MP implementation.....	4
5	Clarification of lag, full specification data used in MP	4

Executive Summary

As identified in the endorsed Schedule of Work for the Development of Management Procedures, the IOTC may select and adopt a Management Procedure (MP) for Bigeye Tuna in 2022, to provide a science-based Total Allowable Catch recommendation to the Commission in 2023. A clear understanding of the timing of aspects of the process and endorsement of the schedule of activities is required for successful implementation of the adopted MP. This document outlines a proposal for the schedule of activities, the timing and responsibility for flow of information in each step, and clarifies the role of the MP, operating models (OMs) and the stock assessment once an MP is adopted. The MSE taskforce agreed that the MP decision making year (when the MP is run to provide a TAC recommendation) should be offset from the year in which an assessment of stock status is conducted, so that these two processes remain distinct. This outline of the process also provides information on the time period (i.e. lag) between data exchange and TAC advice. This schedule of activities, to be adopted with the MP, is called the ‘meta-rules’.

1 Introduction

When a Management Procedure (MP) is adopted, it is useful to fully specify the schedule of activities for implementation of the MP (called meta-rules). This includes specification of the flow of advice to the Commission and timing of setting the Total Allowable Catch (TAC). This schedule of activities was discussed at the WPM13 MSE taskforce 2022.

The MP implementation schedule of activities includes:

- Collating the data for use in the MP (catch and CPUE).
- Timing and running of the MP to provide a recommended TAC to the Commission.
- Schedule for review of data and information on the stock to examine evidence for exceptional circumstances. The IOTC Scientific Committee (SC) has endorsed exceptional circumstances guidelines that outline the process that ensures that an adopted MP TAC recommendation is safe to implement (IOTC–SC24, 2021, Appendix 6A). The schedule of activities specifies when the exceptional circumstances are reviewed.
- The role and timing of stock assessments to provide updated advice on stock status. The WPM(MSE) considered it important to ensure that the MP decision making year (when the MP is run to provide a TAC recommendation) is offset from the year in which an assessment of stock status is conducted, so that these two processes remain distinct (IOTC–WPM13(MSE), 2022).
- The timing of a review of the performance of the Management Procedure.

The schedule of activities clarifies the time between data received, TAC decisions and implementation, which was requested by the TCMP at their 4th meeting in June 2021.

2 Schedule of activities for TAC advice

The IOTC is scheduled to decide on whether to select and adopt an MP for bigeye tuna (BET) in 2022, as outlined in the SC endorsed Schedule of Work for the Development of MPs (IOTC–SC24 2021, Appendix 6B). If an MP is adopted at the 2022 Commission meeting, the following schedule of activities would form the implementation plan for running the MP and setting the TAC:

The Working Party on Tropical Tuna and the Working Party on Methods would:

1. update the specified data required to run the MP (Catch and CPUE), and
2. provide any advice or analysis on exceptional circumstances to the SC.

The SC would:

1. run the MP,
2. consider exceptional circumstances, and
3. provide advice on the recommended TAC to the next meeting of the Commission (which is in the following year, given current timing of meetings).

The Commission would:

1. review the TAC recommendation and exceptional circumstances advice from the SC and set the TAC for the next block of years. The MSE has evaluated MPs that set the TAC for 3-year blocks.

3 Role of MP, OMs, Stock Assessment and Review of MP Performance

Management Procedure (MP)

Only the MP code is used to calculate the recommended TAC. The aim of adopting the MP is to have a single pre-agreed rule for setting a TAC that is robust to a range of uncertainties and is not subject to ‘tinkering’ or negotiation.

The operating models (OMs) used to evaluate the candidate MPs are archived and the structure and set of results should remain fixed in time (at the time of MP adoption), to provide a record of the conditions against which the MP was tested. This provides the bounds for evaluation of exceptional circumstances (e.g. are the input data for the MP within the bounds explored by the OMs? Are the population dynamics within the range used in testing the MP?).

Operating models (OMs)

The OMs do not need to be reconditioned, even if new information or data sets become available or substantially different models are developed (e.g. for assessment of stock status), unless new evidence is provided that indicates that population dynamics or key uncertainties are outside of the bounds of the original testing of the MP (i.e. exceptional circumstances conditions are triggered). If there is evidence for exceptional circumstances, the guidelines should be followed and TAC advice still provided unless there is a substantial risk to the stock.

Stock Assessment

The role of the stock assessment is also changed when an MP is adopted, as it is only used to provide advice on current stock status, not management advice. New stock assessment models, with differing data and methodologies, can be developed without any impact on the MP and TAC advice process or original OMs. The stock assessment models will indicate whether the MP is performing as planned.



The WPM13(MSE) agreed that the frequency of stock assessments should be every 3-years, and ***that the stock assessment and MP will be run in years offset from each other, so that the role and function of the two items remains distinct***. There is a clash in current scheduling of the assessment that will need to be resolved if the BET MP is adopted and implemented in 2022.

Review of MP performance

A review of MP performance should also be part of the implementation schedule. The performance review should be timed to allow a sufficient period of MP implementation to ensure that performance can be demonstrated (e.g. 3 TAC setting periods, i.e. 9+ years). ***The aim of the review is to ascertain if the MP is performing as expected***, and whether there are any conditions that warrant reconditioning of the OMs, retuning of the existing MP (i.e. adjusting control parameters within the MP), or consideration of alternative candidate MPs and a new management strategy evaluation (MSE). As this will be a large piece of work for the SC, it's recommended that this would be offset from the TAC setting year.

The SC has recommended that a technical review of the MSE OMs, robustness testing and adopted MP be conducted (2022-2024), which does not need to be part of the MP implementation schedule and is distinct from the MP performance review described above.

4 Schedule for MP implementation

IOTC COMMITTEE	2022	2023	2024	2025	2026	2027	2028	2029
Commission (June)	Select and adopt BET MP	Annual Review of SC advice 						
		Set TAC (2024-2026)			Set TAC (2027-2029)			Set TAC (2030-2032)
WPTT and WPM (Oct)	Collate catch and CPUE data used in MP			Collate catch and CPUE data used in MP			Collate catch and CPUE data used in MP	
	Consider exceptional circumstances (EC), advise SC			Consider EC			Consider EC	
SC (Dec)	Run MP			Run MP			Run MP	
		Assess stock status			Assess stock status			Assess stock status
	Annual Review of Exceptional Circumstances 							
		Provide TAC advice to the Commission			Provide TAC advice			Provide TAC advice

5 Clarification of lag, full specification data used in MP

If the Commission adopts a schedule for implementation that is similar to the one outlined here, the steps will be:

- the MP will be run in late 2022 at the SC,
- the Commission will consider the TAC advice in 2023, and
- the TAC will be set for 2024-2026.

The last year of data that will be available for use in the MP in 2022 will be the 2021 updated catch and CPUE. There will need to be clear specification of the CPUE standardisation model and data sources, so that these remain constant across years as the MP is implemented. There will also need to be a commitment from the IOTC members to provide the standardised CPUE, and total catch estimates, as specified, each time the MP is implemented and also in the year that a stock assessment is completed.

Given the current specified schedule, data up to 2021 will be used to provide advice to the Commission in 2023, and will inform the TAC set for 2024-2026. This lag has been tested in the MSE, as it is built into the OMs and MP and therefore the MP performance results, and is similar to the lag for the CCSBT MP (Anon., 2021 (Table 3)).


The WPM13(MSE) discussed whether this schedule could be shortened if the Commission decided to implement TAC advice almost immediately after the SC provides the advice on TAC and consideration of exceptional circumstances. This scheduling is a decision for the Commissioners.

References

Anon. 2021. Report of the Extended Scientific Committee for the Twenty Sixth Meeting of the Scientific Committee, 23 - 31 August 2021. CCSBT-EC/2110/Rep-02

IOTC-SC24 2021. Report of the 24th Session of the IOTC Scientific Committee. Online, 6 – 11 December 2021. IOTC-2021-SC24-R[E]: 226 pp. Appendix 6B and Appendix 6A.

IOTC-WPM13(MSE) 2022. Report of the 13th Session of the IOTC Working Party on Methods (MSE Task Force). Online 7-10 March 2022. IOTC-2022-WPM13(MSE)-R[E]: 23 pp.



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Contact us

1300 363 400
+61 3 9545 2176
csiro.au/contact
csiro.au

For further information

Oceans and Atmosphere

Ann Preece
+61 3 6232 5222
ann.preece@csiro.au
csiro.au/