



IOTC-2025-TCMP09-R[E]

## Report of the 9th IOTC Technical Committee on **Management Procedures**

Reunion, France, 12 April 2025

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#### **ACRONYMS**

BET Bigeye Tuna

BMSY Biomass that achieves maximum sustainable yield

CMM Conservation and Management Measure (of the IOTC; Resolutions and Recommendations)

CPCs Contracting parties and cooperating non-contracting parties

EU European Union

FAO Food and Agriculture Organization of the United Nations

IOTC Indian Ocean Tuna Commission MP Management Procedure

MPD Management Procedures Dialogue
 MSE Management Strategy Evaluation
 MSY Maximum Sustainable Yield
 SC Scientific Committee, of the IOTC

SSB Spawning stock biomass

SPC Secretariat of the Pacific Community

tRFMO tuna Regional Fisheries Management Organization

TAC Total Allowable Catch

TCMP Technical Committee on Management Procedures

WP Working Party of the IOTC

WPB Working Party on Billfish of the IOTC

WPEB Working Party on Ecosystems and Bycatch of the IOTC

WPM Working Party on Methods of the IOTC WPNT Working Party on Neritic Tunas of the IOTC

WPDCS Working Party on Data Collection and Statistics of the IOTC

WPTmT Working Party on Temperate Tunas of the IOTC WPTT Working Party on Tropical Tunas of the IOTC

YFT Yellowfin Tuna

# STANDARDISATION OF IOTC WORKING PARTY AND SCIENTIFIC COMMITTEE REPORT TERMINOLOGY

SC16.07 (para. 23) The SC **ADOPTED** the reporting terminology contained in Appendix IV and **RECOMMENDED** that the Commission considers adopting the standardised IOTC Report terminology, to further improve the clarity of information sharing from, and among its subsidiary bodies.

#### How to interpret terminology contained in this report

#### 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 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.

#### Level 3: General terms to be used for consistency:

**AGREED**: Any point of discussion from a meeting which the IOTC body considers to be an agreed course of action covered by its mandate, which has not already been dealt with under Level 1 or level 2 above; a general point of agreement among delegations/participants of a meeting which does not need to be considered/adopted by the next level in the Commission's structure.

**NOTED/NOTING**: Any point of discussion from a meeting which the IOTC body considers to be important enough to record in a meeting report for future reference.

**Any other term:** Any other term may be used in addition to the Level 3 terms to highlight to the readers of IOTC reports the importance of the relevant paragraph. However, other terms used are considered for explanatory/informational purposes only and shall have no higher rating within the reporting terminology hierarchy than Level 3, described above (e.g. **CONSIDERED**; **URGED**; **ACKNOWLEDGED**).

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#### **EXECUTIVE SUMMARY**

The ninth Technical Committee on Management Procedures meeting was held on the 12 April 2025 in Reunion, France. The meeting was held in a hybrid format, with delegations present physically in the meeting room, and some participants attending by videoconference. The meeting was chaired by Dr Toshihide Kitakado (chair of the IOTC Scientific Committee). The Chair **NOTED** that Ms Jung-re Riley Kim (Chair of the IOTC), could not co-chair the meeting as initially intended. However, she offered online assistance virtually. The Chair welcomed 105 delegates from 25 Contracting Parties of the Commission and 10 Observers (including the invited experts) to the session.

TCMP.Rec.01 (Para. 34). The TCMP **NOTED** that the application of the bigeye management procedure generated an unconstrained estimated TAC of 175,005 t which is more than 15% higher than the TAC set for 2024 and 2025. The TCMP **NOTED** that by applying the maximum 15% increase in the TAC as per Resolution 22/03, the MP recommended an annual TAC of 92,670 t for 2026-2028. Therefore, the TCMP **RECOMMENDED** that the Commission adopt the TAC advice for Bigeye tuna of 92,670 t resulting from the MP.

TCMP.Rec.02 (Para. 46). The TCMP **RECOMMENDED** adopting Australia's proposal (IOTC-2025-S29-PropU) to amend the swordfish MP (as specified in Resolution 24/08), to ensure the current objective of at least 60% probability of being in Kobe green zone is met during 2034-2038. This involves a minor amendment to the Target CPUE in Annex I of Res 24/08, changing it from 0.7125 to 0.75. Further, the TCMP **RECOMMENDED** that the Commission establish a TAC (30527 t) for swordfish for 2026-2028 based on the revised MP **NOTING** that this TAC is the same as that from the original MP.

## 1. Opening of the meeting

1. The ninth Technical Committee on Management Procedures meeting was held on the 12 April 2025 in Reunion, France. The meeting was held in a hybrid format, with delegations present physically in the meeting room, and some participants attending by videoconference. The meeting was chaired by Dr Toshihide Kitakado (chair of

- the IOTC Scientific Committee). The Chair **NOTED** that Ms Jung-re Riley Kim (Chair of the IOTC), could not cochair the meeting as initially intended. However, she offered online assistance virtually.
- 2. The Chair welcomed attendees and opened the meeting. Mr. Kitakado highlighted the critical importance of developing Management Procedures to guide IOTC members in governing key species under the Commission's purview. He acknowledged the significant progress achieved in Management Strategy Evaluation and the development of Management Procedures through collaborative efforts among members. This progress has led to the successful adoption of Management Procedures for several major IOTC species in recent years. The Chair further stressed the need to maintain this momentum and continue advancing MSE through open dialogue and collaboration.
- 3. The Chair welcomed 105 delegates from 25 Contracting Parties of the Commission and 10 Observers (including the invited experts) to the session. The list of participants is provided in <a href="Appendix I">Appendix I</a>

### 2. Adoption of the agenda and arrangements for the session

- 4. The Chair **NOTED** that TCMP was established to improve the mutual understanding and effective communication between science and management, as well as to facilitate the commission's decision-making process on issues pertaining to management procedures. To this end, scientists reported on their progress in developing and assessing management procedures for the major Indian Ocean tuna stocks, following the guidelines outlined in Resolution 15/10 and the related workplan that the Commission approved.
- 5. The adopted agenda for the meeting is presented in <u>Appendix II</u>. The documents presented to the TCMP are listed in <u>Appendix III</u>.

#### 3. Admission of observers

6. Pursuant to Article VII of the Agreement establishing the IOTC, the TCMP09 admitted the following observers, as defined in Rule XIV of the IOTC Rules of Procedure (2023):

Non-governmental Organisations (NGO)

- BLOOM
- CCSBT
- DSM-Deutsche Stiftung Meeresschutz
- IPNLF-International Pole and Line Foundation
- ISSF-International Seafood Sustainability Foundation
- PEW Charitable Trusts
- Sustainable Fisheries and Communities Trusts
- TOF-The Ocean Foundation
- World Wide Fund For Nature

#### **Invited Experts**

Taiwan, Province of China

#### 4. Decisions of the Commission related to the work of the TCMP

#### 4.1. Outcomes of the 8th Session of the TCMP

7. The TCMP were informed of the main outcomes of the 8th Technical Committee on Management Procedures (IOTC-2025-TCMP09-03), included in the paragraphs below:

(Para. 26) Considering that all Skipjack MPs tested show good performance with respect to stock status (e.g., all showing stock biomass above the LRP with high probability) and little difference among them in other performances measures under the reference set, the TCMP **NOTED** that all MPs ensure the skipjack will be managed within safe biological limits. Therefore, the TCMP **RECOMMENDED** the Commission to consider for adoption the EU proposal for the MP that has the following properties: (i) 50% probability of being at the skipjack target reference point in 2034-2038 (i.e., 40% BO), (ii) the stable type MP parameterisation, and (iii) an asymmetric TAC change clause.

(Para. 27) The TCMP **NOTED** that increased catches of skipjack will also affect yellowfin and bigeye stocks which are overfished and subject to overfishing. The TCMP **RECOMMENDED** that the SC investigate and incorporate ecosystem effects in the next skipjack revision of the MP since the fishery of skipjack will impact catches in other species, such as yellowfin, bigeye, and sharks.

(Para. 28) Moreover, considering that in the past skipjack catches have been greater than the recommended limits, the TCMP **RECOMMENDED** the Commission to take the necessary actions to ensure that catches do not exceed the TAC when the MP is applied.

(Para. 44) After considering the performance and trade-off between management objectives of the six candidate management procedures of swordfish, the TCMP **RECOMMENDED** the Commission to consider for adoption the Australian proposal for a swordfish MP: MP1 or MP2. These have the following properties: a fast reacting, data-based type MP, with either 60% (MP1) or 70% (MP2) probability of being at the target reference point in 2034-2038.

(Para. 45) The TCMP also NOTED that changes in swordfish catch will also affect other species, particularly shark species. The TCMP RECOMMENDED that the SC investigate and incorporate ecosystem effects in the next swordfish revision of the MP.

(Para. 56) Considering the progress on MSE for IOTC species, the TCMP **RECOMMENDED** that a virtual TCMP be convened early in 2025 with a special focus on albacore tuna if the SC agrees that sufficient progress has been made, and a one-day TCMP be convened back-to-back with the Commission's Session in 2025. The TCMP also **RECOMMENDED** that the WPM(MSE) be held in March/April, and that the next TCMP meeting should include a capacity building component, taking into considerations of the options suggested by the small Working Group.

- 8. The TCMP **NOTED** that these recommendations were subsequently endorsed by the Commission. Additionally, the proposals for the skipjack and swordfish Management Procedures were adopted as binding resolutions.
- 9. The TCMP also **NOTED** the information document <u>IOTC-2025-TCMP09-INF02</u>, which summarises the outcome of the MSE Task Force meeting held from February 24. The meeting discussed progress on Albacore tuna and the running of the bigeye tuna management procedure in accordance with requests from SC27.

### 5. Introduction to MSE and presentation of MSE results

10. The TCMP **NOTED** a presentation by the Chair, which outlined the fundamental principles of the MSE process and the communication of its outcomes. The presentation detailed essential elements of MSE procedures, including the differences between model-based and data-based management approaches, tuning criteria

aligned with management objectives, and components such as TAC change constraint and time lags in TAC implementation. Additionally, he highlighted the importance of regular assessments of exceptional circumstances related to the implementation of the management procedure. The Chair also encourages the use of the Concept mapping approach to enhance the understanding of relationship between various MSE elements.

- 11. The TCMP **NOTED** the informational document <u>IOTC-2025-TCMP09-INF01</u>, which is the Educational Tools developed for MSE Capacity Building, funded by an Australian grant (also available at <a href="https://iotc.org/educational-tools">https://iotc.org/educational-tools</a>).
- 12. The TCMP **NOTED** the informational document <u>IOTC-2025-TCMP09-INF07</u>, which provides a summary of the MSE capacity-building workshop held in the Maldives from August 26 to 28, 2024. The TCMP **NOTED** that the workshop was requested by the Commission and focused on training fishery managers from coastal countries in the fundamental aspects of the MSE process. Organized by the Maldivian government with financial support from the World Bank, ISSF, PEW, and the Ocean Foundation, the workshop was attended by 35 participants from 15 countries and 4 experts, representing a wide range of roles and expertise. This workshop aims to enhance the ability of coastal states to engage more effectively in MSE discussions and MP evaluations during TCMP and Commission meetings in the future.
- 13. The TCMP **THANKED** the organizers and sponsors for their efforts and resources in making this workshop possible. The TCMP **NOTED** that the informal setting and arrangement provided an excellent opportunity for fishery managers and stakeholders to share a diverse range of perspectives on fishery management issues. Additionally, the hands-on exercises using simulation tools were highly effective in facilitating the understanding of MSE concepts. Recognizing that the composition of negotiating teams in CPCs often changes frequently, the TCMP **AGREED** that regularly conducting such exercises through refresher courses would enhance the MSE capacity of coastal countries.

# 6. Status of the management strategy evaluation/management procedure and actions needed for adoption/implementation

#### 6.1. Albacore tuna.

14. The TCMP **NOTED** the presentation of paper <u>IOTC-2025-TCMP09-04</u>, which provides an update on further MP simulation testing for Indian Ocean albacore tuna, including the following summary provided by the authors.

"The development of Management Strategy Evaluation (MSE) analyses for Indian ocean albacore is about to embark on its final phase. An updated set of operating Models (OMs) has been conditioned applying a novel methodological approach that has solved the problems encountered with the previous set, based directly on the stock assessment. Some technical difficulties have delayed the evaluation of candidate Management Procedures (MPs), which still require a round of review by the Working Party on Methods of IOTC before being ready for presentation to TCMP. The current document reports on the main features of the approach taken when conditioning OMs for this stock, presents some initial results, and indicates the next steps of work. The feedback of TCMP is required of the planned set of management objectives to be explored."

- 15. The TCMP **NOTED** in the presentation that the new methodology is based on the development of a new method the Approximate Bayesian Computation (ABC) that has been **ENDORSED** by the SC.
- 16. The TCMP **NOTED** the considerable work done by Wageningen Marine Research (WMR, Netherlands) and CSIRO (AUS), that was co-funded by the IOTC and the Australian Department of Foreign Affairs and Trade (DFAT, AUS).
- 17. The TCMP **NOTED** the methods around conditioning the OMs for the MP. There are several axes of uncertainty that the OMs incorporate: CPUE data, the influence of size data on estimates, the impact of assumptions on catchability changes in LL fleets, S-R steepness and natural mortality, and recruitment variability.
- 18. The TCMP **NOTED** that the ABC methods are similar to those used in the first SKJ MSE, and the ABC methodology uses discrepancy functions rather than likelihood. The TCMP **NOTED** that discrepancy functions allow the differences between the dynamics generated by the OM and the data to be characterised, providing a flexible approach when quantifying uncertainty. The TCMP also **NOTED** that the ABC methodology allows the use of priors on many quantities, such as stock status, overfishing probability, and others as informed by the stock assessment, and can allow for overfishing penalties on runs with unrealistic depletion.

- 19. The TCMP **NOTED** that the OMs are concerned with characterising current cohorts of fish, and not the entire history of the fishery. Therefore, the OMs are conditioned with the previous 21 years (2000-2021) data from the longline CPUE, total catch by fishery, and catch-at-length by fishery, aggregated over time. The TCMP **NOTED** that these are structurally simple models than the current stock assessment (for example using a smaller number of fleets) model as the OMs are not concerned with providing precise estimates of current stock status, but characterise their uncertainty.
- 20. The TCMP NOTED the robustness trials that have been done so far, including low and high (30%) future recruitment compared to historical levels; greater spasmodic recruitment (more intense increases and decreases); different levels of precision and bias in the CPUE indices; and various climate change scenarios (increased growth, earlier maturity, reduced maximum size). The TCMP DISCUSSED additional climate change scenarios relating to the spatial redistribution of the stock and NOTED that these could be investigated at a later stage if data allows.
- 21. The TCMP **NOTED** the two current MPs: a model-free MP using the trend and value of longline CPUE from areas 1 and/or 3; and a model-based MP using a surplus-production model, a Pella-Tomlinson model as implemented in the JABBA software. Both candidate MPs would use a catch-based hockey-stick HCR that has a 'buffer' zone around the desired CPUE or SSB/SSBO and the management output is either a TAC (catch) multiplier or an absolute value of TAC (not originally included as is in SKJ MP). The TCMP **NOTED** that when the stock is estimated to be in the 'buffer' zone, catch is maintained at the target level (i.e. a catch multiplier of one), otherwise there is a linear decrease in catch down to a 'threshold' value of CPUE or SSB/SSBO when the catch multiplier decreases exponentially. The HCR allows the catch multiplier to increase linearly if the indicator increases above the 'buffer'.
- 22. The TCMP **DISCUSSED** the addition of another MP that used a traditional hockey-stick rule where the catch only reduces when the biomass is below the threshold (as in the SKJ MP). The TCMP **NOTED** that the proposed hockey-stick rule was shown with a y-axis of 'catch multiplier' and not an absolute value for catch. The TCMP **AGREED** to include an additional MP that is the same as SKJ where the y-axis is catch as opposed to a catch multiplier to allow for an understanding of absolute values of catch that the MP recommends.
- 23. The TCMP **NOTED** that the MPs have included various assumptions including: limits to the TAC increases of 15 and 30%, and a minimum catch set at 10% of MSY as agreed during the TCMP in 2022; a data and management decision lag of three years.
- 24. The TCMP **DISCUSSED** the tuning objectives, the three scenarios for P(Kobe=Green) of 50%, 60%, and 70%, and the proposed MPs. There was some discussion as to whether the P(Kobe=Green) = 50% was still needed, and some countries suggested it could be removed from the scenarios. However, it was **AGREED** that all three scenarios should be retained in the tuning of the MPs to provide the TCMP with estimates of potential loses of catches with each of the scenarios.
- 25. The TCMP **AGREED** to the presented timeline for the continuation of the work.

#### 6.2. Bigeye tuna.

- 26. The TCMP NOTED Information paper <u>IOTC-2025-TCMP09-INF03</u>, which provides Joint CPUE indices for the bigeye tuna in the Indian Ocean based on three distant water longline fisheries for use in MP application, <u>IOTC-2025-TCMP09-INF04</u>, which runs the IOTC Bigeye Tuna Management Procedure for 2024, and <u>IOTC-2025-TCMP09-INF05</u>, which provides an update on Consideration of Exceptional Circumstances for the Bigeye Tuna MP 2025. These papers were reviewed during the Special Session of the SC in February 2025.
- 27. The TCMP **NOTED** that Resolution 22/03 on a bigeye management procedure includes an adopted Management Procedure (MP) schedule that requires the MP to be run by the IOTC Scientific Committee in 2024, through the Working Party on Methods and Working Party on Tropical Tunas, including a review of exceptional circumstances, to derive a recommended TAC for 2026, 2027 and 2028 for IOTC Commission consideration.
- 28. The TCMP **RECALLED** that the bigeye MP uses a 60% tuning criteria for the production model-based MP and applies a 15% constraint on the maximum change to the TAC. The TCMP **NOTED** that the MP relies on the catch time series as well as the joint CPUE series.

- 29. The TCMP **NOTED** that a standardised catch per unit effort (CPUE) index based on the agreed methodology (as per Resolution 22/03) was not available to run the bigeye (BET) Tuna MP in 2024 in time for the Scientific Committee to review. As agreed and recommended by the SC in 2024, the joint CPUE group responsible for producing the index held their meeting in February 2025, and produced the BET CPUE index which was presented to the WPM(MSE) Taskforce meeting in February 2025 (IOTC-2025-TCMP09-INF03) which reviewed this and ran the BET MP (IOTC-2025-TCMP09-INF04). The TCMP **NOTED** that the Special Session of the SC then convened in February to review the outcomes of the MP run.
- 30. The TCMP **NOTED** that the joint CPUE trend this year was developed using operational level data, whereas the series in 2022 was aggregated without the use of operational data as a result of the constraints imposed by the pandemic. The TCMP further **NOTED** there were some minor methodological changes from the agreed CPUE specifications of the MP (i.e., the use of lognormal instead of delta model due to time constraints and the exclusion of some data), however, the TCMP **NOTED** that it follows the CPUE standardisation approach as adopted in the bigeye MP.
- 31. The TCMP **NOTED** that previously the Biomass to carrying capacity ratio was smaller than 40% of the carrying capacity so the full fishing intensity wasn't applied. However, the TCMP **NOTED** that during this recent MP run the biomass was above this 40% of the target so the full fishing intensity was applied.
- 32. The TCMP **NOTED** that similar trends were observed in the CPUE during the 2019 and 2022 runs in all regions. The TCMP **NOTED** that while there was a slight difference in the estimation of the CPUE series, the main differences are likely to be derived from the data used (operational vs. aggregated). The TCMP **NOTED** that any large changes in CPUE are investigated through the examination of exceptional circumstances
- 33. The TCMP **NOTED** that the 2025 CPUE series shows similar trends to the 2022 CPUE during the historical period from 1979-2018. However, the TCMP **NOTED** that the 2025 CPUE series raised slightly above the 95% confidence interval which can have the impact of a higher TAC resulting from the MP. The TCMP **NOTED** that the impact of this is buffered by the constraint of a maximum 15% change to the TAC which is applied in the MP.
- 34. The TCMP **NOTED** that the application of the bigeye management procedure generated an unconstrained estimated TAC of 175,005 t which is more than 15% higher than the TAC set for 2024 and 2025. The TCMP **NOTED** that by applying the maximum 15% increase in the TAC as per Resolution 22/03, the MP recommended an annual TAC of 92,670 t for 2026-2028. Therefore, the TCMP **RECOMMENDED** that the Commission adopt the TAC advice for Bigeye tuna of 92,670 t resulting from the MP.
- 35. The TCMP **NOTED** the large difference between the previous TAC and this new recommended TAC. The TCMP **NOTED** that the CPUE series has a primary effect in the outputs of the MP and the increasing trend observed in the recent 3 years of the CPUE series will be driving this increased TAC due to the optimistic abundance trend observed in the CPUE. The TCMP further **NOTED** that catches in recent years have also been increasing which (along with the CPUE trend) the model would have interpreted as an increase in biomass.
- 36. The TCMP **NOTED** that the CPUE is within the MSE range investigated for the recent years 2021-2023. However, the TCMP also **NOTED** a positive exceptional circumstance because the CPUE is above the expected range of values in 2019 and 2020 and was slightly outside the range of values tested during the MSE process, which may have an impact of a slightly higher TAC resulting from the MP. However, the TMCP **NOTED** that the constraint in the MP on a TAC change of 15% will act to constrain any excessive response to these higher CPUE values to ensure that a conservative TAC is recommended.
- 37. The TCMP **NOTED** that a wide range of unconstrained TACs were generated in the MSE testing of the MP, with the upper TAC change constraint (15%) being triggered frequently. The TMCP also **NOTED** that the 2025 unconstrained TAC was within the range generated in the MSE testing, and that the 15% maximum TAC change acts as an important buffer to maintain a more stable TAC setting process.
- 38. The TCMP **ACKNOWLEDGED** the hard work done by members of the joint CPUE working group and members of the MSE task force for developing the updated CPUE series and running and reviewing the bigeye MP.
- 39. The TCMP **NOTED** that two CPC have developed a proposed Resolution (prop F) on establishing catch limits for bigeye tuna in the IOTC based on the recommended TAC of 92,670 t.
- 40. The TCMP **ENCOURAGED** the SC to finalise the results of the bigeye in 2027 so that managers have plenty of time to consider the results ahead of the TCMP and Commission meetings in 2028.

41. The TCMP **NOTED** that the 15% constraint for the stability clause was applied in 2025 due to the high estimated TAC. The TCMP **NOTED** that if this were to happen repeatedly, the Commission may request the SC to investigate this in more detail to ensure that the MP is running correctly. The TCMP further **NOTED** the inclusion of this constraint in the running of the MP could not be removed without amending the current Resolution.

#### 6.3. Swordfish

- 42. The TCMP **NOTED** Information Paper <u>IOTC-2025-TCMP09-INF08</u>, which proposed a revision of Resolution 24/08 concerning the swordfish Management Procedure. This proposal aims to incorporate a recommendation from the Scientific Committee to make a minor adjustment to the Swordfish MP to ensure the procedure meets the Commission's objective of maintaining at least a 60% probability of the stock being in the Kobe green zone between 2034 and 2038.
- 43. The TCMP **NOTED** that the 2024 Working Party on Methods found that the MSE simulations for MP performance used simulated CPUE data instead of actual data from 2020-2022, which was intended for the period prior to the first TAC cycle of 2023-2025 (refer to <a href="https://linear.ncbi.nlm.ncbi.nl
- 44. The investigation by the MSE developers revealed that using actual CPUE data from 2020-2022 slightly affects the performance of the MP, leading to a somewhat higher exploitation level and reduced stock size. However, it decreases the probability of being in the Kobe green zone to 54%, below the Commission's target of 60% (Resolution 24/08). Furthermore, the original MSE assumed a one-year management lag, while in practice, a two-year management lag is more accurate, both of which were tested during the MSE.
- 45. To resolve this issue, the MP was retuned using the observed CPUE values and appropriate management lag to achieve a 60% probability of being in the Kobe green zone. The TCMP **NOTED** that both the WPM and the SC found the overall performance of the recalibrated MP to be comparable to the currently adopted MP.
- 46. The TCMP **RECOMMENDED** adopting Australia's proposal (IOTC-2025-S29-PropU) to amend the swordfish MP (as specified in Resolution 24/08), to ensure the current objective of at least 60% probability of being in Kobe green zone is met during 2034-2038. This involves a minor amendment to the Target CPUE in Annex I of Res 24/08, changing it from 0.7125 to 0.75. Further, the TCMP **RECOMMENDED** that the Commission establish a TAC (30527 t) for swordfish for 2026-2028 based on the revised MP **NOTING** that this TAC is the same as that from the original MP.

#### 6.4. General issues

#### 6.4.1. MP implementation, actions and regular implementation review

- 47. The TCMP **NOTED** the MP implementation schedules for bigeye tuna, skipjack tuna and swordfish are outlined in respective resolutions. The WPM and SC has discussed the roles and responsibilities in the MP implementation. The Secretariat has been tasked with running the MP, with the assistance of relevant developer. The WPM also agreed to a process in which the WPM chair will coordinate with CPCs, institutions, and scientists and conduct evaluations of exceptional circumstances.
- 48. The TCMP **NOTED** the evaluation of MPs will occur in 2030 to ensure that the current MPs are performing well and achieving what they have set out to do.
- 49. The TCMP **NOTED** that the SC has recommended a process to reinitiate the MSE for YFT and the Chair of WPTT provided information on the status of the development of YFT MSE. The TCMP **was informed** that the first round of OMs for YFT MPs are planned to be presented at the WPM. The TCMP **NOTED** the provision of funding from the ISSF to allow for this work to be developed.

## 7. Future direction of the technical committee on management procedures

#### 7.1. Workplan

#### 7.1.1. New Timelines

50. The TCMP **AGREED** the MSE timeline put together by the WPM and presented by the Chair.

- 51. The TCMP **NOTED** that in 2025 the WPM and SC will work on progressing the MP for albacore tuna with the aim of having a range of candidate MPs available for review by the TCMP in 2026. However, the TCMP **NOTED** that the MP may require further conditioning, particularly if the outputs from the OM are very different from those from the assessment that will be conducted by the WPTmT this year.
- 52. The TCMP **NOTED** that work on the MSE for blue shark has been included in the WPM workplan. The TCMP **ENCOURAGED** this work, **NOTING** that blue shark is an important stock and it is important to manage this stock sustainably.

#### 7.1.2. Budget and resources needed for technical development

- 53. The TCMP **NOTED** that as the MPs for skipjack, swordfish and bigeye tuna have been adopted, there are no imminent funding needs to address outstanding issues.
- 54. The TCMP **NOTED** that the ongoing work on the albacore and new work on the blue shark MSE have been included in the WPM program of work, so funding is available from the IOTC budget for these activities. The TCMP further **NOTED** that the EU has pledged funding that will support the ongoing MSE work so further funding should not be required for these upcoming projects.

#### 7.1.3. External review

- 55. The TCMP **NOTED** that an external consultant has been contracted to conduct the bigeye MSE review. The TCMP **NOTED** that good progress has been made, preliminary results have been presented to the MSE task force which provided good feedback.
- 56. The TCMP **NOTED** that the final review is expected to be presented to the WPM in October.

#### 7.2. Priorities

- 57. The TCMP **NOTED** that as albacore is likely to be the next species for which a MP will be adopted, this is the highest priority for ongoing work. The TCMP **NOTED** that after albacore, yellowfin and blue shark will be the next highest priorities.
- 58. The TCMP **NOTED** that while recent studies have suggested that there may be multiple stocks of yellowfin tuna in the Indian Ocean, the MSE will consider only a single stock initially. The TCMP **NOTED** that the initial work will focus on conditioning of the OM based on the stock assessment models from 2021 and 2024 and will look at hypotheses regarding data and growth parameters.

### 7.3. Process and future meetings of TCMP

- 59. The TCMP **NOTED** that the SCAF discussed the possibility of holding the TCMP online intersessionally in years where the adoption of a new MP is unlikely **NOTING** that moving this meeting online would save both time and funds. The TCMP **NOTED** that this would require a revision of Resolution 16/09 which provides the Terms of Reference for the TCMP.
- 60. The TCMP **NOTED** that as the albacore MP is likely to be recommended for adoption by the SC next year, it would be advisable to hold an in-person meeting in 2026. The TCMP further **NOTED** that in years that a MP has not been recommended for adoption, the TCMP may still be required to consider exceptional circumstances.
- 61. The TCMP **NOTED** the value of having flexibility to accommodate different situations each year. Noting that Resolution 16/09 currently requires the TCMP to be held back-to-back with the Commission meeting. TCMP suggested that the Commission consider an amendment to the Resolution 16/09 that would allow TCMP meetings to be held, when appropriate, intersessionally and online. Under that arrangement, TCMP considered that in any given year, the Commission would (under advice of the SC Chair) indicate its preferred date and nature (online or in person) of the following years TCMP. However it would also allow for the SC (following the Commission) to request a change to the Commissions suggested approach if SC discussions identified subsequent circumstances associated with development and review of MPs that warranted such a change

8.	Adoption of the Report
62.	The report of the 9th IOTC Technical Committee on Management Procedures meeting (IOTC-2025-TCMP09-R) was <b>ADOPTED</b> on 12 April 2025

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#### **APPENDIX II**

# AGENDA FOR THE 9<sup>TH</sup> IOTC TECHNICAL COMMITTEE ON MANAGEMENT PROCEDURE

Date: 12 April 2025

Location: Reunion, France (Hybrid)

Co-Chairs: Ms Riley Kim Jung-re (Commission Chair) and Dr Toshihide Kitakado (SC Chair)

- 1. OPENING OF THE SESSION AND ARRANGEMENTS (Co-Chairs)
- 2. ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION (Co-Chairs)
- 3. ADMISSION OF OBSERVERS (Co-Chairs)
- 4. DECISIONS OF THE COMMISSION RELATED TO THE WORK OF THE TECHNICAL COMMITTEE ON MANAGEMENT PROCEDURES (IOTC Secretariat)
  - 4.1 Outcomes of the 8<sup>th</sup> Session of TCMP
- 5. INTRODUCTION TO MSE AND PRESENTATION OF MSE RESULTS
- 6 STATUS OF THE MANAGEMENT STRATEGY EVALUATION/MANAGEMENT PROCEDURES AND ACTIONS NEEDED FOR ADOPTION/IMPLEMENTATION (Developers)
  - 6.1 Albacore tuna
  - 6.2 Bigeye tuna
  - 6.3 Swordfish
  - 6.4 General Issues
    - 6.4.1 MP implementation, actions and regular implementation review
- 7 FUTURE DIRECTION OF THE TECHNICAL COMMITTEE ON MANAGEMENT PROCEDURES (Co-Chairs)
  - 7.1 Workplan
    - 7.1.1 New timelines
    - 7.1.2 Budget and resources needed for technical developments
    - 7.1.3 External review
  - 7.2 Priorities
  - 7.3 Process and future meetings of TCMP
- **8 ADOPTION OF REPORT (Co-chairs)**

# APPENDIX III LIST OF DOCUMENTS

Document	Title
IOTC-2025-TCMP09-01a	Draft: Agenda of the 9th Technical Committee on Management Procedure Meeting
IOTC-2025-TCMP09-01b	Draft: Annotated agenda of the 9th Technical Committee on Management Procedure Meeting
IOTC-2025-TCMP09-02	Draft: List of documents of the 9th Technical Committee on Management Procedure Meeting
IOTC-2025-TCMP09-03	Outcomes of the 7th Technical Committee On Management Procedure
IOTC-2025-TCMP09-04	Development of Management Strategy Evaluation analyses for Indian ocean albacore tuna (Mosqueira I, Hilary R)
IOTC-2025-TCMP09-INF01	IOTC MSE Handout
IOTC-2025-TCMP09-INF02	Report of the 16th Session of the IOTC Working Party on Methods (Management Strategy Evaluation Task Force)
IOTC-2025-TCMP09-INF03	Joint CPUE indices for the bigeye tuna in the Indian Ocean
IOTC-2025-TCMP09-INF04	2025 update on running the IOTC Bigeye Tuna Management Procedure for 2024
IOTC-2025-TCMP09-INF05	Consideration of Exceptional Circumstances for the Bigeye Tuna MP 2025
IOTC-2025-TCMP09-INF06	Proposal for amending the management procedure adopted for the Indian Ocean swordfish and practical aspect for its first implementation
IOTC-2025-TCMP09-INF07	MSE Capacity Building Workshop Summary Report
IOTC-2025-TCMP09-INF08	On a Management Procedure for Swordfish (AUS)