

OUTCOMES OF THE 28th SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY: IOTC SECRETARIAT, 17 MAY 2026

PURPOSE

To inform participants at the 28th Working Party on Tropical Tunas Data Preparatory meeting (WPTT28(DP)) of the recommendations arising from the 28th Session of the IOTC Scientific Committee (SC) held from 1-5 December 2025, specifically relating to the work of the WPTT.

BACKGROUND

At the 28th Session of the SC, the SC noted and considered the recommendations made by the WPTT in 2025 that included requests to address the deficiencies in data collection, monitoring and reporting by CPCs, as well as to carry out targeted research and analysis on tropical tuna species.

Tropical tunas caught in the IOTC area of competence and under the WPTT mandate

Common name	Species	Code
Bigeye tuna	<i>Thunnus obesus</i>	BET
Skipjack tuna	<i>Katsuwonus pelamis</i>	SKJ
Yellowfin tuna	<i>Thunnus albacares</i>	YFT

The recommendations on the deficiencies in data collection, monitoring and reporting by CPCs in relation to tropical tunas will be discussed in paper IOTC–2026–WPTT28(DP)–07 and are therefore not presented in this paper.

Based on the recommendations arising from the WPTT27, the SC28 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 30th Session held in May 2026.

In addition, the SC28 reviewed and endorsed a Program of Work (2026–2030) for the WPTT, including a revised assessment schedule. A separate paper will be reviewed during the WPTT28(AS) and will outline the review and development process for a *Program of Work* for the WPTT for the next five years.

DISCUSSION

In addition to the recommendations outlined in [Appendix A](#), the following extracts from the SC28 Report (2025) are provided here for the consideration and action of the WPTT28(DP):

Report of the 27th Session of the Working Party on Tropical Tunas (WPTT27)

165. The SC **NOTED** the report of the 27th Session of the Working Party on Tropical Tunas ([IOTC–2025–WPTT27–R](#)), including the consolidated list of recommendations provided as an appendix to the report. The meeting was attended by 65 participants (cf. 130 in 2024). Eight participants received funding through the MPF. The SC **NOTED** that the lower attendance in 2025 was likely due to no YFT assessment being held in this year.
166. The SC **NOTED** that the update of yellowfin tuna catch limits for 2024 and 2025 following Resolutions 19/01 and 21/01 was provided by the Secretariat (see Section 7.6.2). The SC **NOTED** that catches of tropical tunas have been stable the past three years at around 1.2 million tonnes.
167. The SC **NOTED** that this year, there was one full stock assessment completed by the WPTT (bigeye tuna, BET), and an update to the yellowfin tuna (YFT) joint longline CPUE indices as requested by the SC in 2024. The SC **CONGRATULATED** the WPTT for completing these two tasks and providing an update to the 2024 YFT stock assessment, using the revised joint longline CPUE indices.

Bigeye tuna stock assessment

168. The SC **NOTED** that the bigeye tuna (BET) stock assessment was run as a continuity from the previous stock assessment, but with new catch and effort data, new CPUE series, and some new biological assumptions. The model contains a revised catch data series from Indonesia resulting in a 12% decrease in catches for BET in 2024, which are more aligned with the allocated catches from the BET Management Procedure.
169. The SC **THANKED** the authors of the assessment, and the WPTT for completing the assessment, under tight timelines, after a new catch dataset was provided during the WPTT meeting.
170. The SC **NOTED** that the reported stock status is based on a grid of 36 model configurations that account for the uncertainty in the stock recruitment relationship, longline selectivity, instantaneous rate of natural mortality, and longline catchability dynamics. Overall, the stock assessment results suggest that BET has nearly recovered to the adopted target reference point ($B_{\text{target}} = B_{\text{MSY}}$) after the recent reduction in catch.
171. The SC **NOTED** that spawning stock biomass in 2024 is estimated to be 0.98 (0.71-1.25) times the level that can support MSY ($B_{\text{target}} = B_{\text{MSY}}$). Fishing mortality was estimated at 0.94 (0.69-1.18) times the F_{MSY} level. The assessment indicates that the median SSB_{2024} is below SSB_{MSY} (the probability of SSB being above $\text{SSB}_{\text{MSY}} = 45.6\%$ which is less than 50 %).
172. The SC **NOTED** that on the weight-of-evidence available in 2025, the BET stock is determined to be **overfished** but **not subject to overfishing**. The SC **NOTED** that the multifactorial probabilities estimated for the four quadrants indicate larger probabilities of red (38.4%) and green (45.6%) status.
173. The SC **DISCUSSED** the results of the current stock assessment, and that the stock status differs from the previous assessment (in 2022, the stock status was **overfished** and **subject to overfishing**, but in 2025, the stock has moved into the middle of the KOBE plot, representing a stock that is recovering).
174. The SC **NOTED** that although there are differences between the stock status when comparing the previous and current assessments, these are not drastic and reflect expected fisheries dynamics when fishing mortality is reduced. The stock status trajectory shown in the KOBE plots (green → orange → red → yellow → green) is consistent with an overfished stock that is responding to lower fishing pressure, and the model is behaving as anticipated, which was welcomed by some CPCs.
175. The SC **AGREED** that communicating the stock status well is extremely important when a stock is estimated to be close to MSY levels. Several CPCs expressed difficulty interpreting how the indicators F/F_{MSY} and $\text{SSB}/\text{SSB}_{\text{MSY}}$ were being combined into the final stock classification, given that the KOBE quadrant with the highest percentage (of 46 %) was the GREEN quadrant, however the stock has been given a stock status in the YELLOW quadrant, based on the median value of $\text{SSB}/\text{SSB}_{\text{MSY}}$ which is < 1.0 , and the probability of being $< \text{SSB}_{\text{MSY}}$ is less than 50%.
176. The SC **NOTED** concerns raised by CPCs regarding the interpretation of probabilities, questioning whether fishing mortality and spawning stock biomass could be treated independently. In particular, the SC **NOTED** that probabilities derived from the ensemble of models reflect the proportion of plausible model structures that lead to a given outcome. They should not be interpreted as statistical uncertainty derived from within-model variance as this was not accounted for in the final KOBE plot. The SC **NOTED** that if **both** within-model statistical uncertainty and between-model structural uncertainty were accounted for, then the probability would represent a fully integrated ensemble probability - e.g., “Given the set of plausible model structures and the uncertainty within each model, the probability that the stock is below B_{msy} is X%”.
177. The SC **NOTED** proposals to include probability distributions along the axes of the KOBE plot (as is done in ICCAT) that may reduce confusion in interpreting the results.
178. The SC **NOTED** the concern of some CPCs that combining F/F_{MSY} and $\text{SSB}/\text{SSB}_{\text{MSY}}$ results can confuse interpretation and **SUGGESTED** including information on target reference points (TRPs), **NOTING** that the TRP for BET is $\text{SSB} \geq \text{SSB}_{\text{MSY}}$. Some CPCs supported this, adding that the stock is close to MSY levels and that similar situations may arise as management improves. The SC **NOTED** a proposal to return to the previous approach of expressing the percentage of overfished and overfishing classifications to provide clarity.

179. The SC **DISCUSSED** the weighting of models within the ensemble, and it was clarified that uncertainty from the individual models (“little dots”) was not incorporated due to time constraints, and only grid-level structural uncertainty was included. The SC **RECALLED** the past practice of weighting models differently using diagnostic tables and **SUGGESTED** that the grid may be weighted in future assessments.
180. The SC **NOTED** concerns that using the yellow quadrant from the KOBE plot may cause confusion when communicating the stock status to the Commission, compared to the percentage values for being in each of the four quadrants (e.g. the green quadrant has the highest percentage, but the stock is classified as yellow). The SC also **NOTED** concerns that this approach of using 50% probability leads to a stock status that is on a ‘knife-edge’, and when the stock is around the TRP (currently SSB_{MSY}), the stock will fluctuate between the four quadrants, even though the stock is performing as expected under the Management Procedure (MP).
181. The SC **RECALLED** that the approach to determine stock status that has been provided by the WPTT aligns with IOTC practice of assessing biomass and fishing mortality separately, and that the stock is at its target. The SC **RECALLED** that the stock assessment of BET serves to monitor the MP.

Yellowfin tuna

182. The SC **NOTED** paper [IOTC-2025-SC28-12](#), which provided Updated joint CPUE indices for yellowfin tuna in the Indian Ocean based on Japanese, Korean, and Taiwanese longline fisheries data up to 2024, with the following abstract provided by the author:
- “Joint CPUE standardization for the Indian Ocean yellow tuna was conducted using Japanese, Korean and Taiwanese fisheries data up to 2023. This effort aimed to provide the IOTC Scientific Committee with updated abundance indices for its review for stock assessment. The collaboration sought to enhance the spatial and temporal coverage of fishery data, thereby producing combined indices. To account for inter-annual variations in the target species for each fishery, data on hooks between floats or clustering results were incorporated for each region. Conventional delta-lognormal linear regression models were applied to standardize catch-per-unit-effort data, using shared operational data in each region. Overall, the trend in CPUE was broadly consistent with those used in 2018 and 2021 stock assessments except for recent upward trend”*
183. The SC **NOTED** paper [IOTC-2025-SC28-13](#), which provided Preliminary analysis of the 2024 yellowfin assessment model with updated longline CPUE, with the following abstract provided by the author:
- “In this document, we explore the impacts of the revised standardized longline CPUE index presented by Kitakado et al. (2025b) on the IO yellowfin stock assessment output, stock status, and management advice by running the final grid of the 2024 yellowfin assessment with the revised longline CPUE”*
184. The SC **RECALLED** the request from the 27th Scientific Committee, that the joint longline CPUE indices for YFT be revisited to ensure this was completed accurately as there were substantial differences between the CPUE indices used in the 2021 stock assessment, and the 2024 stock assessment. The SC **NOTED** that a joint longline CPUE group had convened for a workshop early in 2025 for the purpose of working on these indices together.
185. The SC **CONGRATULATED** the authors of the joint longline CPUE index for correcting the error in the 2024 YFT joint longline CPUE indices (with the corrected updated provided in IOTC-2025-SC28-12). The SC **NOTED** however, that these indices were provided late to the WPTT, making detailed scrutiny of the indices more challenging. Despite the short time available, the WPTT was able to analyse the indices, and further **CONGRATULATED** the authors of the YFT stock assessment on providing a preliminary analysis of the stock assessment model grid using the corrected joint longline CPUE indices that was presented to the SC (IOTC-2025-SC28-13).
186. The SC **NOTED** the presentation of the preliminary analysis of the stock assessment for YFT, **NOTING** the impact of the updated CPUE indices on the stock status and relevant reference points.
187. The SC **NOTED** the updated KOBE plots (Figure) provided by the authors that show that the stock is in the green quadrant of the KOBE plot with 76.6 % likelihood (compared to 89.2 % previously).

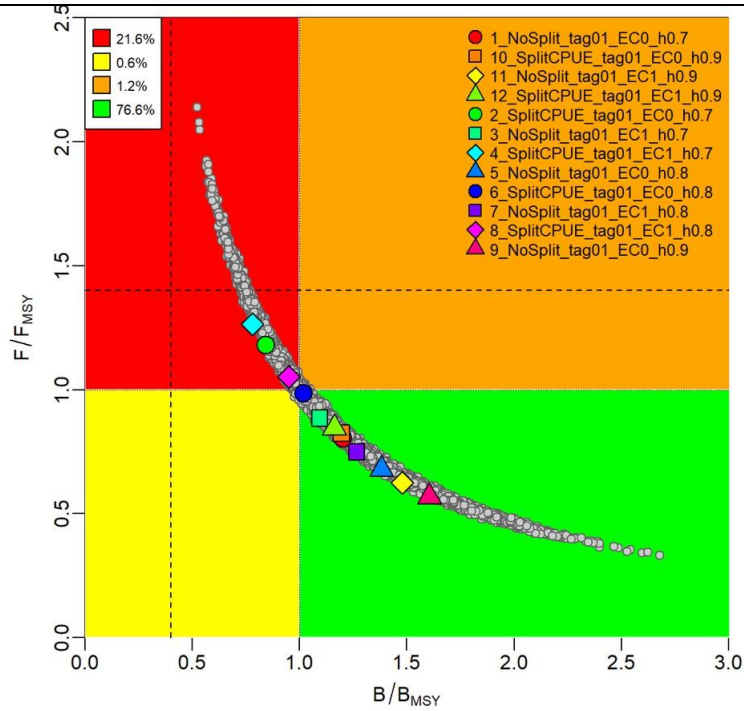


Figure 4: The KOBE plot from the updated 2024 YFT Stock Assessment in SS3 with the updated CPUE indices. 188. The SC **NOTED** the trajectory of the stock, with the trajectory of the previous assessment (2021) now align with the stock status in that year (red quadrant of the KOBE plot), which is an improvement on the previous version of the 2024 model (Figure).

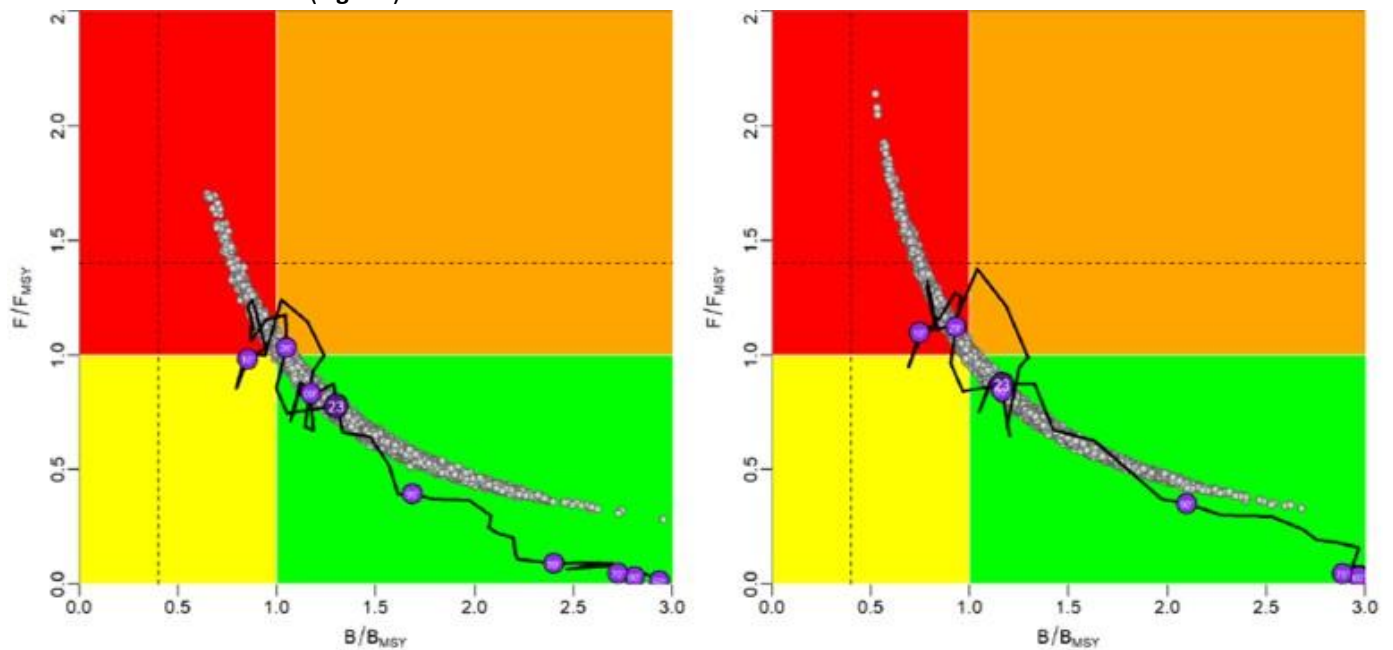


Figure 5: KOBE plots showing the trajectory of the stock from the base model from the earlier version of the 2024 model (LHS) and the updated model (RHS). The previous assessment (purple circle with 23 in the middle) is now in the red quadrant of the KOBE plot (see RHS) which aligns with the previous stock status for YFT (overfished and subject to overfishing) compared to the previous 2024 model, where the trajectory showed the model to be in the orange quadrant of the KOBE plot (see LHS). 189. The SC **NOTED** the annual projected SSB/SSB_{MSY} values from the updated 2024 model with a projected catch of 421,000 t for the 2024 and revised 2025 model (Figure). The SC **NOTED** that these projections showed similar projected values, **NOTING** that the updated model predicts lower values of SSB in future years, however the long-term outlook (2024-2033) projects that the stock will not become **overfished** in the projection period.

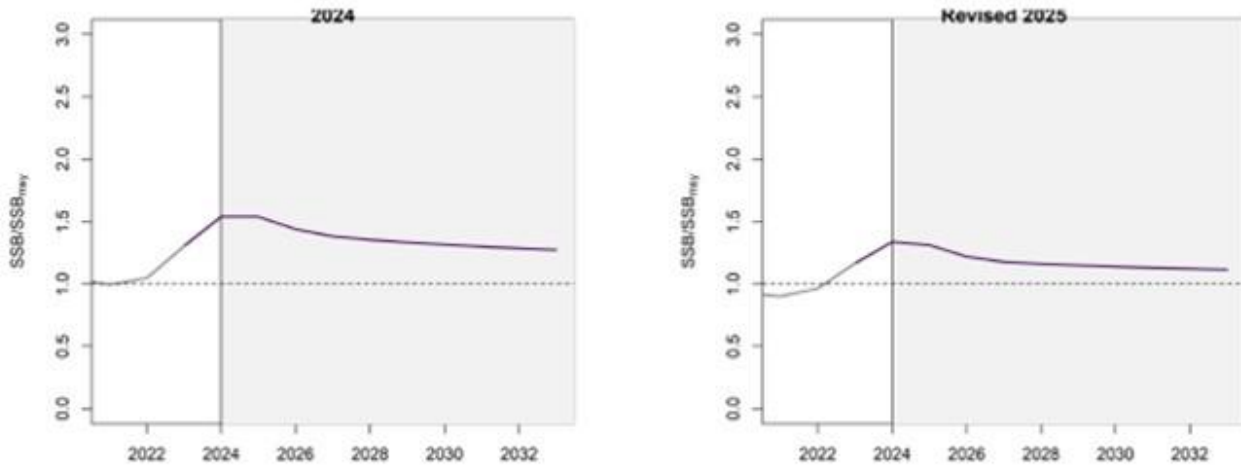


Figure 6: Annual projected SSB/SSB_{MSY} assuming an annual projected catch of 421,000 t for the 2024 (LHS) and updated (RHS) models. The grey line indicates the model period, while the purple line indicates the projection period (2024-2033).

190. The SC **NOTED** concerns regarding significant increases observed in depletion indices (increasing above B_0) in some of the model configurations (particularly in the “no split” models). The SC **DISCUSSED** the implications of these results, **NOTING** that the model appears to handle the updated CPUE series in a way that produces an unrealistic upward trend in the population soon after the start of the fishery. The SC **NOTED** the stock assessor’s explanation that these results are likely a result of the observed increase in CPUE following the start of the time series, and that the model responds to this by increasing biomass to account for this increase. The SC also **NOTED** that the fits to the indices are best in the most recent 10-15 years which is more important than the early years of the model, when there is uncertainty whether changes to the CPUE index may not reflect true changes in abundance, or reflect changes to historical data management, particularly as this time period (1975-1979) only includes data from one of the CPCs in the joint index (Japan). The SC **AGREED** that these issues require further investigation when the full assessment is next completed.
191. The SC **DISCUSSED** the timeframe of recruitment periods used in projections, to understand whether they reflect recent or more long-term population dynamics.
192. The SC **NOTED** that when viewing unscaled reference points, that the unscaled SSB_{MSY} values show a higher probability of the stock being above SSB_{MSY}, while the scaled MSY only changes minimally (421,000 t compared to 420,000 t).
193. The SC again **CONGRATULATED** the authors of the assessment for conducting this work under a short time frame and **AGREED** that the assessment now contained corrected CPUE indices.
194. The SC **AGREED** that the stock assessment for YFT would not need to be re-run in 2026, and a full assessment would take place according to the PoW in 2027.
195. The SC **AGREED** to extend the management advice for 2026 with a total catch of 421,000 t to 2027 and 2028.
196. The SC further **NOTED** that improved data reporting from previously data-poor regions, such as Somalia, contributes to a more complete understanding of catch distribution and stock productivity.

Skipjack tuna

197. The SC **NOTED** that 2025 was not an assessment year for skipjack tuna, but that the Management Procedure was run ([IOTC-2025-WPTT27-17](#)), and exceptional circumstances were assessed. The SC **NOTED** that there were no exceptional circumstances in 2025.

Update on the WGFAD07

198. The SC **NOTED** the report of the 7th Working Group meeting on FADs ([IOTC-2025-WGFAD07-R](#)). The meeting was attended by 72 participants (90 participants in WGFAD06 respectively in 2024).
199. The SC **NOTED** the recommendations from the WGFAD.
200. **NOTING** that the majority of the structure of most FADs are submerged underwater meaning that reading their unique FAD identifier can be challenging, the SC **NOTED** the WGFAD’s recommendation to consider the following

while developing a marking scheme: 1) including redundancy or checkbits in DFAD (and buoy) identifiers to allow errors to be identified; 2) embedding QR codes and Radio Frequency Identifiers (RFIDs) in buoys and potentially DFADs so that they can be easily scanned to avoid errors with manual input of the identifiers; 3) create standards for including the ID marking on DFADs, focusing on putting them as close to the surface as possible to facilitate reading their ID; and 4) assess the feasibility of marking bio-FADs.

201. There was no discussion during the SC regarding this point.

Other Matters

202. The SC **NOTED** that exceptional circumstances of adopted MPs need to be considered at both species WPs and WPM. The SC also **NOTED** that there is benefit in species WPs being held before WPM to allow discussions on issues such as new information on biology before the consideration of potential modelling implications and as such **AGREED** that in the future the WPM be held after the WPTT

RECOMMENDATION

That the WPTT:

- 1) **NOTE** paper IOTC–2026–WPTT28(DP)–03 which outlined the main outcomes of the 28th Session of the Scientific Committee, specifically related to the work of the WPTT.
- 2) **CONSIDER** how best to progress these issues at the present meeting.

APPENDICES

Appendix A: Consolidated set of recommendations of the 28th Session of the Scientific Committee to the Commission, relevant to the Working Party on Tropical Tunas.

APPENDIX A

CONSOLIDATED SET OF RECOMMENDATIONS OF THE 28TH SESSION OF THE SCIENTIFIC COMMITTEE (1-5 DECEMBER 2025) TO THE COMMISSION

STATUS OF TUNA AND TUNA-LIKE RESOURCES IN THE INDIAN OCEAN AND ASSOCIATED SPECIES

Tuna – Highly migratory species

SC28.01 (para. 267) The SC **RECOMMENDED** that the Commission note the management advice developed for each tropical and temperate tuna species as provided in the Executive Summary for each species, and the combined Kobe plot for the four species assigned a stock status in 2025 (Fig. 1):

Albacore (*Thunnus alalunga*) – [Appendix 8](#)

Bigeye tuna (*Thunnus obesus*) – [Appendix 9](#)

Skipjack tuna (*Katsuwonus pelamis*) – [Appendix 10](#)

Yellowfin tuna (*Thunnus albacares*) – [Appendix 11](#)

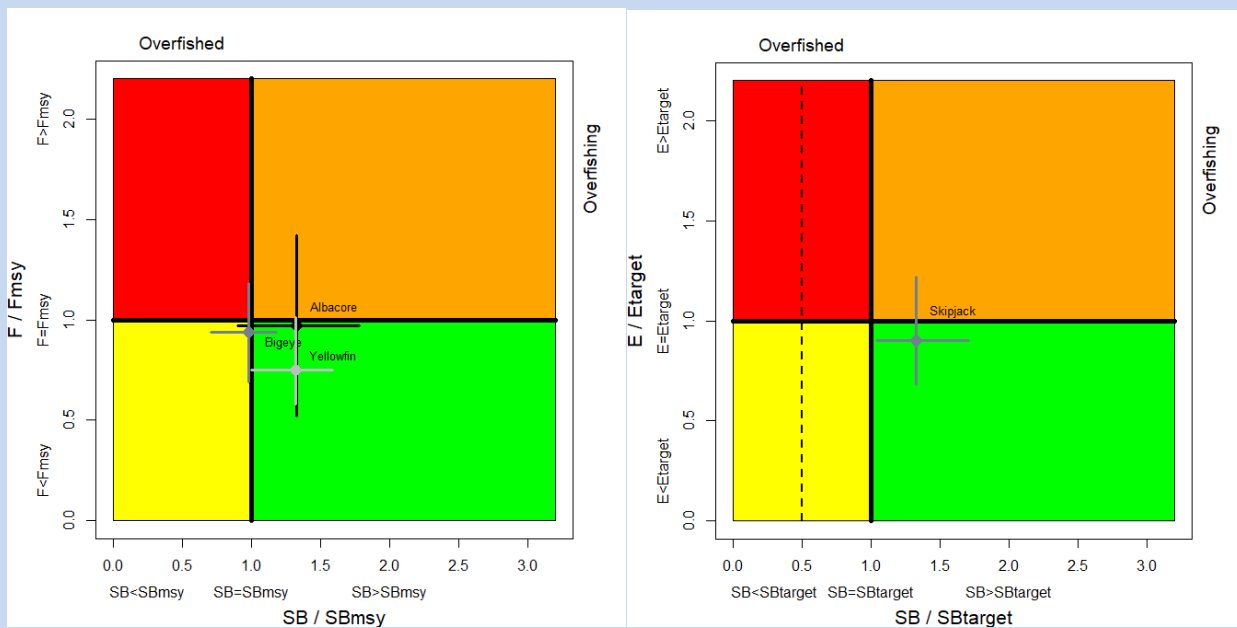


Fig. 1. (Left) Combined Kobe plot for bigeye tuna (black: status in 2024, based on the stock assessment conducted in 2025), and yellowfin tuna (light grey: 2023, with stock assessment conducted in 2024) and albacore (dark grey: 2020 with stock assessment conducted in 2022) showing the estimates of current spawning biomass (SB) and current fishing mortality (F) in relation to optimal spawning stock size and optimal fishing mortality. (Right) Kobe plot for skipjack tuna (2022 with stock assessment conducted in 2023) showing the estimates of the current stock status (The dashed line indicates the limit reference point at 20%SB0 while SBtarget=0.4 SB0). Cross bars illustrate the range of uncertainty from the model runs with an 80% CI (95% CI for albacore).

GENERAL RECOMMENDATIONS TO THE COMMISSION

SUMMARY DISCUSSION OF MATTERS COMMON TO WORKING PARTIES

Observed issues related to IOTC Working Party meetings

SC28.27 (para. 245) The SC **NOTED** the increasing utilisation of the Meeting Participation Fund (MPF) during working parties, observing that this is a positive development which aligns with the Commission's objectives and the original purpose of the MPF. However, the SC **NOTED** a few cases where applicants did not fully meet the MPF requirements, such as failing to submit a complete paper or submitting papers not sufficiently relevant to the meeting's agenda. The SC **NOTED** that there is currently no precedent requiring a recipient to return funds in such situations. Consequently, to ensure the effective use of MPF resources, the SC **RECOMMENDED** that the Commission and SCAF discuss further actions.

Invited Expert(s) at the WP meetings

SC28.28 (para. 260) Given the importance of external independent review for working party meetings, the SC **RECOMMENDED** the Commission continues to allocate sufficient budget for Invited Experts to be regularly invited to scientific working party meetings. The SC **NOTED** that there are generally funds to support 3 or 4 Invited Experts to attend IOTC's working parties.

IOTC species identification guides: Tuna and tuna-like species

SC28.29 (para. 262) The SC reiterated its **RECOMMENDATION** 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 CPC scientific observers, both on board and at port need to have hard copies.

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

SC28.30 (para. 266) 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 7](#).

PROGRAM OF WORK AND SCHEDULE OF WORKING PARTY AND SCIENTIFIC COMMITTEE MEETINGS

Consultants

SC28.31 (para. 293) **NOTING** the highly beneficial and relevant work done by IOTC stock assessment consultants 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.

Data preparatory meetings and Hybrid meetings

SC28.32 (para. 295) **ACKNOWLEDGING** that holding data preparatory meetings prior to stock assessments is considered to be best practice and **NOTING** that since 2019 data preparatory meetings were successfully held for the WPTmT, WPTT and WPEB, the SC **AGREED** to continue the practice of having data preparatory meetings in addition to stock assessment meetings for the main IOTC species. The SC **RECOMMENDED** that data preparatory meetings could continue to be held virtually so as not to increase the travel and costs required for the already full IOTC timetable of meetings.

REVIEW OF THE DRAFT, AND ADOPTION OF THE REPORT OF THE 28TH SESSION OF THE SCIENTIFIC COMMITTEE

SC28.33 (para. 303) The SC **RECOMMENDED** that the Commission consider the consolidated set of recommendations arising from SC25, provided at [Appendix 40](#).