

SC WORPLAN 2018

SC to all WP

- The SC **AGREED** that analysis should be carried out to evaluate potential retrospective patterns in stock assessments, noting that this can have a great impact on the stock assessment quality and is already part of the advice in the IOTC Guidelines for the presentation of CPUE standardisations and stock assessment models which states:

“Alternative scenarios and retrospective analyses should ideally be carried and, if included, a description of the motivation for the selection of base and alternative cases should be added, giving detail of how the alternative case assumptions differ from those of the base case” (Appendix I, IOTC–2014–SC17–06).

- The SC noted the current format of the KOBE II Strategy Matrix can provide information that is of very coarse resolution and **AGREED** that the projections are based on catches which vary in intervals of 5% instead of the current 10%, especially around the values close to the 50% probability. The SC further **REQUESTED** that the tables are extended to ensure that an appropriate range is covered to enable management advice to be provided based on a 50% probability. The SC **REQUESTED** that the performance of catch projection be evaluated retrospectively to ensure the quality of risk analysis in developing management advice.
- The SC further **REQUESTED** that IOTC Working Parties ensure that the advice in **paras. 137 and 138** is followed for future assessments and **REQUESTED** that the WPM update the guidelines for stock assessment¹ developed by the SC in 2015 to reflect this.

SC to WP on Methods

- The SC **AGREED** that work on the presentation of stock status advice for data limited stocks will need to be carried out inter-sessionally, and that this will require some level of preparation and planning. The SC **REQUESTED** the WPM Chairperson liaise with the Chairs of the species WPs (WPNT and WPB) in order to draft a study proposal on this issue and **RECOMMENDED** the Commission allocates funding to this project.
- The SC further **REQUESTED** that IOTC Working Parties ensure that the advice in **paras. 137 and 138** is followed for future assessments and **REQUESTED** that the WPM update the guidelines for stock assessment² developed by the SC in 2015 to reflect this.
- The SC noted that there is currently no structured protocol for establishing base case scenarios and that this may be difficult given that the data varies greatly among species, in terms of availability and quality, and decisions need to be made that are specific to each particular case. The SC **REQUESTED** the WPM develop guidelines for the selection of the grid based approach and/or base case for the provision of management advice.

SC to WPTT and WPM

- The SC **REQUESTED** that collaborative work is carried out by different purse seine fleets active in the Indian Ocean, so as to increase the frequency of production of corrected estimates of yellowfin tuna catches to monitor yellowfin quota consumption and **REQUESTED** the WPTT and WPM to investigate additional or complementary management measures (e.g., input control measures) for purse seiners and other gears that will facilitate the control and monitoring of the management measures adopted by IOTC.
 - The SC noted the recommendation from the WPTT to review the approach used to provide management advice, particularly in relation to how the outcomes from stock assessments are reported against target and limit reference points, and in particular the following issues related to the current reference points:
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- **Status determination** – Currently IOTC stocks are considered to be overfished and subject to overfishing when stocks experience $B < B_{msy}$ and $F > F_{msy}$ according to the KOBE plot, and there is no change to stock status determination when limit reference points (if defined) are breached. This may not always be consistent with the intended application of target and limit reference points, as stocks can breach the target in some years due to natural fluctuations in stock abundance or other sources of variability. In these years, the stock would be assessed as being overfished and/or subject to overfishing.
- **Level at which LRPs and TRPs are set** – Current values of target and limit reference points for IOTC species may equate to low levels of biomass relative to the biomass in the absence of fishing. Consideration should be given to the correspondence between MSY-based and depletion-based RPs when reporting stock status for each stock.
- **The types of LRPs and TRPs** – Current guidance in Resolution 15/10 is to use depletion-based reference points when MSY-based reference points cannot be estimated robustly. The term ‘robustly’ can be subjective, and it would be helpful to articulate more precisely the circumstances under which depletion-based or MSY-based reference points should be used.

SC to FADs WG/WPEB/WPTT/WPDCS

- Noting the differing levels of entanglement potential of FADs, the SC **AGREED** on the need for a definition of non-entangling FADs.

SC to CPCs/WPs

- **EBMF:** The SC noted the limited extent to which ecosystem considerations have so far been analysed by the WPEB. Work on topics such as climate change and socio-economic considerations are yet to begin and will likely be extremely challenging, however, progress has begun with the development of a template for an ecosystem report card (IOTC-2016-SC19-12). Noting that this work is ongoing, the SC **REQUESTED** that the authors provide an update to the WPEB14 in 2018. **Ecosystem Report Card**
- **BIOFAD:** Noting that IOTC, along with other tuna RFMOs, recommended and adopted resolutions to promote reduction of the amount of synthetic marine debris by the use of natural or biodegradable materials for drifting FADs, the SC **ENDORSED** this large-scale project to test the use of biodegradable materials and designs for the construction of drifting FADs in natural environmental conditions. The SC **REQUESTED** the project to present the outcomes of the at sea trials to the next WPEB, WPTT and SC meetings.
- **Electronic Monitoring:** The SC therefore **RECOMMENDED** that the EMS standards presented for purse seine fisheries (IOTC-2016-SC19-15) are adopted and **REQUESTED** that draft standards are similarly proposed for the longline fleets by CPCs currently trialling and implementing EMS on these vessels and that draft standards are also developed for gillnet fleets through the ROS Pilot Project.

SC to Secretariat

- **Regional Observer Pilot Project:** Noting the development of a Steering Committee for the ROS Pilot Project and the few nominations received to-date (one CPC and one NGO), the SC encouraged interested parties submit their nominations to the Secretariat as soon as possible.
- **WPBillfishes:** Due to on-going uncertainties with the reliability of catches reported by Indonesia, particularly in the case of swordfish, the SC **REQUESTED** that the IOTC Secretariat, in collaboration with Indonesia, review the current methods for estimating catches of billfish for Indonesia in the IOTC database and provide an update at the next meeting of the WPB.
- **WPEB:** Noting the findings of the Pacific workshop regarding the effectiveness of large circle hooks, finfish bait and the removal of the first and/or second hooks next to the floats for mitigating sea turtle interactions and mortalities in Pacific longline fisheries, the SC **AGREED** that further consideration of these mitigation techniques for Indian Ocean fisheries is warranted. Such a study should attempt

to develop findings regarding the consequences of various mitigation techniques, primarily with regard to impacts on target and non-turtle bycatch species catch rates, to the extent possible based on data availability and quality. The SC therefore **RECOMMENDED** that the potential for a similar workshop to be held in the Indian Ocean is explored with potential funding from the Commission and/or from the Common Oceans ABNJ Tuna Project. The SC noted this is included in the WPEB workplan and **REQUESTED** the WPEB Chairperson work with the Secretariat to pursue this idea further with potential participants and funding sources.

- **WPDCS:** The SC acknowledged the request that, in the interim period, data providers continue to submit FAD activity data using the existing IOTC Form 3_FA and its current categories, and **REQUESTED** that the IOTC Secretariat provide clarifications on definitions of FAD activity in the context of the IOTC classifications to ensure consistency in the data submissions. The SC **REQUESTED** the addition of a *FAD ownership* field to the list of mandatory information to be collected by IOTC Form 3_FA, as this was considered necessary to model and report the tracking status of all FADs (*i) monitored and owned, ii) not monitored, iii) monitored and not owned*), subject to a recorded activity.
- **SC: IOTC Scientific Strategic Plan**
- **SC-Invited Experts:** The SC **AGREED** that developing a reporting template for Invited Experts would be useful, however, this should be voluntary, flexible and focus on providing constructive criticism. The SC **REQUESTED** that the IOTC Secretariat draft some guidelines, with input from the SC Chair and Vice-Chair, and make these available to the SC for review next year. These should be more flexible and less prescriptive than those described in paper IOTC-2017-SC20-INF06.
- **SC- External Peer-Review:** Noting the recommendation of the IOTC Performance Review (PRIOTC02.02d), the SC **AGREED** that a comprehensive, formal external peer review is sometimes important for important or contentious assessments. Thus, the SC **RECOMMENDED** that a process is established and that the Commission allocates funding for external peer review of stock assessments to take place periodically, based on priorities identified by the SC, and **REQUESTED** that the Secretariat develop ToRs for these, with input from the SC Chair and Vice-Chair, and potentially based on a framework similar to that established for the Center for Independent Experts.

SC to CPCs and Secretariat

- **For Neritics:**
 - Data mining for CPUE standarization
 - Acknowledging the importance of indices of abundance for future stock assessments, the SC **RECOMMENDED** that the development of standardised CPUE series is explored, based on the guidelines developed by the SC in 2015 (*Guidelines for the presentation of CPUE standardisations and stock assessment models*³), with priority given to fleets which account for the largest catches of neritic tuna and tuna-like species (e.g., I.R. Iran, Indonesia, India, Pakistan, and Sri Lanka).
- **For WPDCS:** The SC noted the lack of consensus from participants of the WPDCS13 regarding the classifications to model FAD types and FAD activity types for data reporting purposes, following suggestions presented by IOTC–2017–WPDCS13–27 and the IOTC Secretariat’s comments reported in IOTC-2017-WPDCS13-INF03, and **REQUESTED** that the issue be addressed intersessionally between members of the scientific community, the industry and the IOTC Secretariat in order to submit a revised form to be dicussed at the next WPTT and WPDCS.
- **WPTT:**
 - The SC acknowledged the efficiency value of making the operational logbook data available to appropriate analysts outside of the responsible CPCs, and **RECOMMENDED** that high level arrangements for sharing and confidentiality should be pursued. Noting the confidentiality issues with some of the datasets, the SC **REQUESTED** that the IOTC Secretariat and main stakeholders explore options to facilitate future data sharing agreements which, once in place, may not necessitate face-to-face meetings and could instead include remote processes.
 - The SC **RECOMMENDED** that the joint longline CPUE standardization for tropical tunas should continue, and that further development work should be assigned a high priority. Acknowledging that the law of diminishing returns will affect similar future analyses, the SC suggested that immediate priorities should focus on the following areas:
 - develop joint CPUE indices for other IOTC species (i.e., billfish and sharks);
 - explore possibilities for including CPUE data provided by other IOTC CPCs (particularly coastal fisheries);
 - identify a unified approach for species targeting using simulation testing (for example, the value of cluster analysis is clear in the temperate regions, but less so in tropical regions);
 - recover vessel identification details from historical data;
 - further develop the work on time-area interactions. Include a detailed examination of catch rates and related data in the piracy area, comparing pre-piracy and post-piracy effects. Potentially also consider the effects of localised depletion and renewal processes on catch rates;
 - conduct further analyses to explore 1977 discontinuity (other oceans);
 - develop an Indian Ocean CPUE reference manual for practitioners to use;
 - explore other density probability functions to improve model fit.

SC to Secretariat/Consultant

- **WPTT – YFT:** The SC **AGREED** that development of the next stock assessment of yellowfin tuna should include, or be associated with, a detailed review of the existing data sources, including:
 - Size frequency data: Evaluation of the reliability of length composition from the longline fisheries (including recent and historical data), incorporation of unraised samples in addition to the already provided extrapolated EU purse seiners, thorough review of the other size

frequency data held by IOTC, in collaboration with the fleets involved, to improve the utilization of these data in tropical tuna stock assessments.

- Tagging data: Further analysis of the tag release/recovery data set.
- Alternative CPUE series: a review of the available data from the Indian tuna longline survey data.

TCMP to SC (WPM) and Secretariat

- **MSE Budget:** The SC **REQUESTED** the SC Chairperson, the WPM Chair and Vice-Chairpersons work with the IOTC Secretariat to develop a budget to accompany the workplan agreed by the Commission in S21 (IOTC-2017-S21-14).