**SC14 - MANAGEMENT ISSUES THEME**

**DRAFT RECOMMENDATIONS FOR THE COMMISSON**

**AGENDA 5.1 -DEVELOPMENT OF A HARVEST STRATEGY FRAMEWORK**

Agenda Item 5.1.2: Target Reference Points (TRP)

Yellowfin and Bigeye Tuna

1. SC14 reviewed information on what would be the minimum setting for a candidate spawning-biomass-depletion-based TRP (or maximum fishing-mortality-based TRP) for yellowfin tuna that avoids breaching the LRP with a specified level of probability under the current uncertainty framework (WCPFC-SC14-2018/MI-WP-01). While SC14 noted that the main biological consideration for a TRP is that it should be sufficiently above the LRP, SC14 also noted that the choice of a TRP can be based on a combination of biological, ecological and socioeconomic considerations. In this regard consideration in future of other economic and social objectives for yellowfin tuna in the selection of candidate TRPs would be welcome. Several CCMs also viewed management objectives and TRPs as economic decisions, and that in the context of a multi-species and multi-gear fishery they cannot be taken on a species by species basis in isolation. SC14 recommended that the analyses be repeated for bigeye tuna taking account of the updated 2018 bigeye stock assessment, and with both ‘recent’ and ‘long term’ recruitment assumptions. SC14 recommends that WCPFC15 take note of these results in consideration of management objectives upon which any candidate TRPs for yellowfin tuna and bigeye tuna should be based, and in so doing clarify the management objectives for these species (including the selection of risk levels) so that the additional work identified above can be undertaken. (adopted)

South Pacific Albacore Tuna

1. To be reviewed and adopted on Thursday

Agenda Item 5.1.3: Performance indicators, monitoring strategies and harvest control rules

1. In support of the development of a Roadmap for the management of south Pacific albacore tuna, SC14 reviewed potential elements of the harvest strategy for this species, primarily reference points, the estimation method, and harvest control rules (WCPFC-SC14-2018/MI-WP-02). SC14 endorsed an initial focus on empirical-based estimation methods, using CPUE as the biomass signal, with a secondary focus on model-based approaches. It also endorsed the use of longline CPUE as the primary information source for the estimation method, noting that empirical measures such as CPUE may better align with economic objectives, and they may be easier for some stakeholders to understand. SC14 also reviewed the required criteria for selecting appropriate candidate ‘reference’ longline fleets that may provide the required CPUE series, and provided feedback to the Scientific Services Provider on additional issues which should be considered in progressing this work. SC14 recommends that WCPFC15 use this working paper to inform development of the Roadmap for improving south Pacific albacore management and requests guidance from WCPFC15 on 1) the south Pacific albacore fisheries to be included in the MSE (e.g. longline and troll) and 2) the potential management control method for the fisheries (e.g. through catch, fishing effort, etc.). SC14 also recommends that WCPFC15 note the need for ongoing review of monitoring strategy requirements as the harvest strategy develops, ongoing efforts to gather key economic data on the southern longline fishery, and endorse the proposed work plan for development of scientific aspects of a south Pacific albacore harvest strategy. (adopted)

Agenda Item 5.1.4: Management Strategy Evaluation (MSE)

1. SC14 reviewed several papers related to ongoing work which is being undertaken by the Scientific Services Provider as specified in the Harvest Strategy Work Plan as updated by WCPFC14 (Attachment L in the WCPFC14 Summary Report). It noted that the MSE evaluation framework is constructed from two main components, an operating model (OM) and a management procedure (MP). (adopted)
2. First, SC14 reviewed information on the process of developing and parameterising an OM for the dynamics of the skipjack stock in the WCPO and the fishing fleets that exploit them (WCPFC-SC14-2018/MI-WP-03). In particular, it reviewed and provided feedback on the sources of uncertainty (such as implementation error) that should be included to ensure that the OM covers all important sources of uncertainty, against which the performance of a MP should be evaluated. Several CCMs also expressed a view that the OMs being developed should allow the impacts on other species to be considered. SC14 noted that in the past the Science Service Provider have used some models to look at the impacts of CMMs on more than one species and such an approach, effectively running species-specific but similarly structured OMs in parallel, may be applicable in this case as part of future developments. SC14 also noted that the selection and refinement of OMs and other components of the MSE process will involve an extended iterative and consultative process and requested that the Scientific Services Provider incorporate the specific feedback of CCMs into future iterations. (adopted)
3. Second, SC14 reviewed information and provided clarification and feedback on the development and use of a range of performance indicators for evaluating the relative performance of a set of demonstration management procedures (WCPFC-SC14-2018/MI-WP-04), in particular the list of 11 indicators identified for inclusion for the Tropical Purse Seine Fisheries from Attachment M (WCPFC, 2017). Methods for comparing and synthesizing the relative performance of management procedures using the performance indicators (PI) were also reviewed. SC14 noted that several performance indicators that cannot be quantified in the OM can be moved to the monitoring strategy, though it expressed support for the retention of performance indicator PI-5 (to maximize SIDS revenue from resource rents) and recommended that further work be undertaken to identify options to better evaluate this objective. For PI-10 (avoid adverse impacts on small scale fisheries) several CCMs advocated that the estimation of MSY for the tropical tunas can be used as a proxy to assess downstream effects from the purse seine fishery and recommended that further work be undertaken. Some CCMs also supported the retention of PI-11 because of the multi-species nature of this fishery. SC14 also noted that the use of a smaller number of performance indicators will aid in comparing the relative performance of candidate management procedures. SC14 also agreed that, i) the distribution of the indicator values, not just a measure of the central tendency, should be considered, ii) that the time periods over which the indicators are calculated should be based on an appropriate number of management cycles, based on the life history of the stock, and iii) that the further development of potential indicators and how they are presented is an ongoing process and will benefit from the engagement with other stakeholder groups.(adopted)
4. Third, SC14 reviewed information on the key decisions that i) regional fishery managers and stakeholders, and ii) scientists (through the Scientific Committee) will need to consider under the work plan for adoption of harvest strategies for tuna stocks and fisheries in the WCPO (WCPFC-SC14-2018/MI-WP-05). In noting the useful summary provided by this paper of the roles that each group plays in moving the harvest strategy workplan forward, SC14 also noted that discussion and negotiations would be required on a number of issues and that certain issues would need to be undertaken by both managers and scientists together.(adopted)
5. SC14 requested that revised versions of the above working papers be forwarded to WCPFC15 taking into account the suggestions to clarify, revise and update as appropriate, aspects of these papers. SC14 recommends that WCPFC15 note the progress on the development of the MSE being undertaken under the Harvest Strategy Work Plan and provide the necessary elements being requested from the Commission to further progress this work against the scheduled time-lines noted in this work-plan. (adopted)

Agenda Item 5.1.5: Science and management dialogue

1. To be reviewed and adopted on Thursday

**AGENDA 5.2 - LIMIT REFERENCE POINTS FOR SHARKS**

Agenda Item 5.2.1: Identifying appropriate limit reference points for elasmobranchs for the WCPFC

1. SC14 reviewed the progress report of the project “Identifying appropriate reference points for elasmobranchs within the WCPFC” (WCPFC-SC14-2018/MI-WP-07) noting that this project had only recently commenced and that further work will be undertaken before the project is completed later this year. SC14 provided comments and feedback as requested on the initial work completed and the future work program. SC14 supported the general approaches being developed as a way of avoiding the weaknesses of conventional stock assessment on data poor species and the general hierarchical approach to LRP setting, also noting that the risk-based approach which is different from traditional stock assessment approach may take time to be understood. However, several CCMs expressed some concern that some of the suggested LRPs may be too conservative, noting that the WCPFC convention prescribes different level of treatment for target stocks and non-target species with respect to the setting of reference points. SC14 therefore recommends that WCPFC note that the objective of the WCPFC convention for the management of non-target species is to maintain or restore populations of such species above levels at which their reproduction may become seriously threatened, and recommends that this be explicitly considered in the ongoing work. (adopted)

**AGENDA 5.3 - IMPLEMENTATION OF CMM-2017-01**

Agenda Item 5.3.1: Effectiveness of CMM-2017-01

1. Final review and adoption on Thursday

Agenda Item 5.3.2: Management Issues Related to FADs

FAD Tracking

1. To be reviewed and adopted on Thursday

FAD Numbers

1. To be reviewed and adopted on Thursday