Commission for the Conservation of
Southern Bluefin Tuna

みなみまぐろ保存委員会

CCSBT-EC/2010/09

Report from the Extended Scientific Committee

Purpose

To consider the Report of the Twenty-Fifth Meeting of the Scientific Committee (SC25), incorporating the Extended Scientific Committee (ESC).

Introduction

The Report of the Twenty-Fourth Meeting of the Scientific Committee is provided to this meeting as CCSBT-EC/2010/Rep02.

The ESC Chair will provide a presentation of the ESC's report at this agenda item with a detailed summary of the advice and recommendations from the ESC.

Some of the key points arising from the ESC meeting include:

Consideration of farm and market issues

- A proposal from Japan aimed at improving the existing methodology for monitoring of SBT product distribution in Japan was presented to a small workshop prior to the ESC. It was generally agreed that the proposal captured the intent underlying previous discussions on this matter well, including ESC 24 recommendations, and that the scope covered verification of SBT catch not only by Japan but also by all other Members, including possible unaccounted mortalities. Most actions proposed by Japan received preliminary support from workshop attendees, with some reservations being expressed in relation to the development of a resolution to seek cooperation from non-Members and funding arrangements for ongoing monitoring. Workshop participants agreed that taking into account discussion in this ESC, the proposal should be considered further and discussed in the 2020 Finance and Administration Committee and EC Meetings, including the priority item(s) for implementation and their budgetary implications.
- The Workshop outcomes were reviewed and accepted by the ESC.

Non-Member Mortality

- Updated indirect estimates on non-Member unaccounted mortalities (UAM) were presented to the ESC. These were similar to the estimates presented in 2019.
- The ESC noted that while the estimate of non-Member UAM has little effect on current stock status, it can affect rebuilding of the stock. This is not currently an issue for the Cape Town Procedure (CTP) and the TAC calculated for recommendation for the period 2021-2023, because the CTP is robust to the most recent estimate of non-Member UAM, at least within the range tested. The 2020 TAC has an amount deducted as UAM, but the TAC now recommended for 2021-2023 already accounts for the latest UAM estimates, so that no UAM deduction is required.
- The ESC reiterated the need to take urgent steps to quantify all sources of unaccounted mortalities, as well as the request to Members, the CC and EC to provide information that will assist the ESC in quantifying estimates of these mortalities and reviewing their plausibility in time for the 2022 ESC meeting when the MP will next be used to calculate the TAC.

Fishery Indicators

- The review of indicators provided mixed messages on recruitment with (i) the gene tagging absolute abundance estimate showing a slight decrease, and (ii) the trolling survey index (piston-line index of age 1) increasing from the previous two estimates which were both zero. There are some consistently positive recent trends in the age-based longline CPUE estimates for a number of Members, including the Japanese (core vessels) and Korean fleets but overall the most recent estimates are near to recent estimates or have decreased slightly. For the first time in 2019, the ESC noted an increase from 2010 to 2014 in the CKMR empirical index derived from the POPs; However, in 2015 this decreased slightly.

Operation of the new MP (the Cape Town Procedure)

- Final specifications and documentation of the Cape Town Procedure (CTP) are provided at Attachment 8 of the report of ESC 25. These specifications include an update to the meta-rules' consideration of exceptional circumstances from the Bali Procedure. The meta-rule process describes: (i) the process to determine whether exceptional circumstances exist; (ii) the process for action; and (iii) the guidelines for action.
- The ESC evaluated whether there are events, or observations, that are outside the range for which the CTP was tested, and the implications of this for TAC setting. The scope of this evaluation covered: (i) all input data (gene-tagging, CPUE, and POP and HSP) used by the CTP to calculate a recommended global TAC; (ii) changes in estimates of the population's dynamics and productivity incorporated into the 2020 stock assessment; (iii) the shift in size distribution towards small fish in the Indonesian spawning ground fishery since 2013; and (iv) the potential for fishing mortality (from Members and non-Members) to be greater than that used to calculate the TAC recommended by the MP. Following the meta-rule review of exceptional circumstances, the ESC concluded there was no reason to declare exceptional circumstances, and hence to perhaps modify the TAC recommended by the CTP.
- Application of the CTP adopted by CCSBT 26 resulted in an annual TAC of 17,647t being recommended for the period 2021-2023, which is the same as the current TAC.

Stock Status

- The current estimated trends indicate that the stock has been rebuilding by approximately 5% per year since the low point in 2009, and the MP-based rebuilding plan for SBT appears to be on track to achieving the Extended Commission's objective. Comparison with earlier assessments shows that this trend is consistent with past results.
- According to the 2020 stock assessment, the stock is estimated to be 20% of the initial Total Reproductive Output (TRO); this is 69% of the level required to produce maximum sustainable yield (MSY). The current depletion level is approximately equal to the interim rebuilding target of 20% of initial TRO, but is below the new rebuilding target, adopted in 2019, of 30% of the initial TRO. Fishing mortality is currently about half the level associated with MSY.

Response to CCSBT 26 request for advice on reaching SSB_{MSY} under the current TAC

- SSB_{MSY} (or TRO_{MSY} which is the related quantity estimated in the SBT stock assessment) is well estimated for only relatively few stocks globally and is sensitive to assumptions concerning stock productivity. In the stock assessment for SBT, estimates of TRO_{MSY} and TRO_{MSY}/TRO_0 are highly sensitive to the values of stock-recruitment steepness used in the stock assessment grid. The current grid results in a TRO_{MSY}/TRO_0 estimate with a median of 0.30 (80% PI: 0.22-0.35), which happens to be the same as the CCSBT's agreed target to be reached by 2035 and as was specified for tuning of the CTP. The CTP is designed and tuned to achieve this target in median terms while allowing fishery development by varying how much surplus production can be used for TACs while ensuring continued rebuilding. If the TAC were kept constant at 17,647t, then currently the estimated year at which 30% TRO_0 would be achieved with 0.5 probability is 2033.

Update of the Scientific Research Plan (SRP)

- The ESC noted that a comprehensive review and planning for the SRP was not possible at ESC 25 due to the priority accorded to reviewing the stock assessment and to running the MP for TAC setting. A comprehensive review of and planning for the SRP needs to be revisited at ESC 26, and Members are encouraged to discuss potential research priorities and develop proposals intersessionally.
- The ESC discussed three main priority areas for the SRP: i) estimation of non-Member UAM; ii) progression of CPUE analyses and iii) a design study for an e-tagging project.
- The ESC:
  - Agreed that updated estimates of non-Member UAM would be required by 2022 to be included in the next possible tuning of the MP;
  - Recommended that sufficient resources be made available so that a small technical subgroup, including consultants, can be convened to progress the highest priority elements (at least) of the outlined work on CPUE prior to ESC 26; and
  - Supported the proposal for a design study to evaluate the feasibility of an electronic tagging program and recommended that it be funded.

Budgetary implications

- The budgetary implications of the ESC's workplan are included in paper CCSBT-EC/2010/06 on the Draft 2021 and Indicative 2022-2023 Budgets.

Prepared by the Secretariat