

Chairman's report of the Twenty Sixth Meeting of the Extended Scientific Committee

This is a short report to describe and summarise the key activities and advice from the Twenty-seventh Extended Scientific Committee (ESC27) meeting of the CCSBT. The full report of ESC27 is at CCSBT-EC/2210/Rep02

Stock Status and Management advice

Advice on stock status remains the same as in 2020. Since 2017 the ESC has reported stock status based on a measure of total reproductive output or TRO. The last full stock assessment conducted in 2020 indicated that the TRO was 20 % the initial TRO and that the stock had grown steadily from its low point in 2009. As indicated by the 2020 stock assessment that low point was just under 10% of initial TRO.

While no new stock assessment was conducted in 2022, the ESC reviewed Catch per unit effort (cpue) from multiple fleets and fishery independent indices used in stock assessment and the Cape Town Procedure. It concluded that the indicators are consistent with the 2020 stock assessment and that the stock is expected to continue increasing under current management arrangements.

In 2019, the ESC recommended, and the EC adopted, a new management procedure as the basis for TAC setting. That procedure was developed to meet agreed strategic objectives set by the EC. The procedure is known as the Cape Town Procedure or CTP. Unusually, and because in 2020 a problem was noted in the standardisation of the cpue index used as one of the inputs in the CTP calculation, the ESC in 2022 undertook "reconditioning" of the model used for stock assessments and for developing the CTP. This was a necessary step to allow recommendation of a TAC for the period 2024-2026. While the reconditioning is not a full stock assessment as will be carried out in 2023, the estimates of stock status are consistent with the 2020 stock assessment and indicate continued, slow rebuilding.

In 2020 the ESC ran the CTP and recommended an annual TAC of 17,647 tonnes for the period 2021 to 2023. The EC adopted the recommended TAC. In 2022, ESC27 followed the process agreed in 2020 to check if there is any scientific or technical reason to recommend any adjustment to the current TAC. None was noted and the ESC therefore recommends that the global TAC in 2023 should remain at 17,647 tonnes.

ESC27 ran the CTP to calculate a recommended TAC for the period 2024 to 2026. The calculation included use of the new cpue series. The ESC followed the process agreed in 2020 to check if there is any scientific or technical reason to recommend any adjustment to the recommended TAC. None was noted and the ESC therefore recommends that the global TAC for the years 2024 to 2026 should be 20,647 tonnes. This is an increase of 3,000 tonnes, the maximum permitted under the CTP.

Progress on cpue modelling and implications

Southern bluefin tuna cpue data need to be statistically analysed to develop indices that relate to stock abundance. These cpue indices may then be used alongside other data sets to inform stock assessments as well as the management procedure. A key cpue data set for SBT assessment and the CTP is from Japanese longline fleets. In 2020, following extensive analysis, it was realised that one unusually high index point was caused by the way the statistical models treat missing cells of data, where a cell is a point in time and space. As fishing has changed over time, there has been an increasing number of missing cells and the importance of the way this is modeled has grown.

In essence, as fishing has contracted to fewer places and time periods, the statistical methods have had to interpolate for cells with no data from fewer and fewer cells with data, and with increasingly large gaps.

During 2021 and 2022, extensive inter-sessional work was carried out on understanding the problem and developing new statistical modelling approaches to deal with it. The collaborative work has focused on improved methods of interpolating. At the midyear OMMP meeting in 2022, final testing of cpue models led to adoption at ESC 27 of a new cpue series for use in stock assessment and in the CTP calculations. This represents a major step forward and the ESC has recommended work for further development of monitoring series.

Scientific Research Plan

The Scientific Research Plan or SRP has needed updating for some years but has been delayed due to the heavy workload of the ESC and its member scientists. At ESC 26, the agenda allowed a very thorough discussion and planning of inter-sessional work to progress the SRP during 2022. The inter-sessional process adopted at ESC 27 used a rigorous approach to receiving proposals and prioritising scientific and technical projects. At ESC 27, the proposals were further considered and ranked in order of priority. The intention is that alongside indicative budgets, the ranking might facilitate discussions at the FAC. The ranked proposals do not include core work which are viewed as imperative.

Recommendations from the Performance Review Panel

ESC 27 was tasked by the EC to provide advice to CCSBT 29 on any final recommendations from the Performance Review which are pertinent to the ESC. This proved to be a difficult task during a virtual meeting for which Members had provided little input. ESC 27 followed the process used by ERSWG 14 to create a list of prioritised recommendations though modified the criteria used. Amongst the highest ranked recommendations, ESC 27 noted that many of them were for continuation of work rather than for new work. Others relate to capacity building which ESC 27 viewed as more pertinent to the EC and Members but which the ESC could engage with if directed by the EC. The outstanding prioritised recommendation related to RFMO collaboration on forecasting the effects of climate change. ESC 27 noted that all of the recommendations have merit and also that individual Members saw high priority on specific recommendations such as that on the use of electronic monitoring.

Electronic Monitoring

New Zealand sought advice from ESC 27 on a draft proposal to update the CCSBT's Scientific Observer Program Standards (SOPS) to include electronic monitoring systems (EMS). New Zealand suggested this as an interim measure and anticipates that a full review of monitoring requirements taking into account developments in EMS and the information now available from the catch documentation system would be advantageous in the future.

The ESC discussed the proposal at length as well as the benefits of EMS more generally. The ESC made minor revisions to the draft proposal from New Zealand and recommends that the revised SOPS at Attachment 13 of the ESC Report (CCSBT-EC/2210/Rep02) be adopted by the EC. The ESC agreed that EMS activities should be reported to the ESC in Member's National Reports and that additional papers on EMS should be submitted if there are technical issues requiring ESC consideration. The ESC recommended that an EMS agenda item be added to the agenda of future ESC meetings, to consider new EMS information and protocols.

Communication between the ESC and EC

At the 2020 EC meeting, some Members were concerned that when adopting the CTP in 2019 they had expected that the TAC for 2021-2023 would increase. They were therefore surprised in 2020 when this did not happen and were critical of the way the ESC had communicated. Particular attention was paid by some Members to a figure in the 2019 ESC report showing a median catch trajectory from the management procedure testing.

This issue led to an ESC 26 agenda item on communication between the ESC and EC. Discussion at ESC 26 was wide ranging, with consideration of general issues and potential ways to improve communication, as well as on the specific, motivating reason on better advising on potential future catches.

ESC 26 made suggestions for improved general communication. Some of these have been adopted, including simple explanations of the CTP on the CCSBT website. ESC 26 suggested that Members and the EC might request pre-EC webinars or discussions with the Chair or Expert Panel. None have been requested of or since ESC 27.

In response to being asked about potential future TAC, beyond the years for which TAC are recommended by the ESC, ESC 26 suggested that in 2022 it might be possible to provide indicative advice about the 2027-2029 TAC. ESC 27 considered this at length and has provided advice subject to a number of reservations. The general advice is that the TAC calculation for 2027-2029 currently suggests a very small chance of a decrease, about a 40% chance of no or a modest increase of up to 400 tonnes, about a 40% chance of an increase between 400 and 3000 tonnes, and about a 20% chance of the maximum increase of 3,000 tonnes. These numbers will change as new data become available in the next few years and as the operating model is updated.

Budgetary implications

The budgetary implications of the ESC's three-year workplan has been included in paper CCSBT-EC/2210/06 on the Draft 2023 and Indicative 2024-2025 Budgets.