Commission for the Conservation of
Southern Bluefin Tuna

みなみまぐろ保存委員会

Report of the Thirty-First Meeting of the Scientific Committee

27 August 2026
Brussels, Belgium

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Agenda Item 1. Opening of meeting

1. The independent Chair, Dr Kevin Stokes, welcomed participants and opened the meeting.
2. The list of participants is shown in **Appendix 1**.

Agenda Item 2. Approval of decisions taken by the Extended Scientific Committee

3. The Scientific Committee endorsed all the recommendations made by the Extended Scientific Committee for the Thirty-First Meeting of the Scientific Committee, which is shown in **Appendix 2**.

Agenda Item 3. Other business

4. There was no other business.

Agenda Item 4. Adoption of report of meeting

5. The report of the Scientific Committee was adopted.

Agenda Item 5. Closure of meeting

6. Members expressed their sincere appreciation to Dr Kevin Stokes for his many years of dedication and substantial contributions as Chair of the CCSBT Scientific Committee.
7. The meeting was closed at 05:02 pm on 27 August 2026.

List of Appendices

Appendix

1. List of Participants
2. Report of the Extended Scientific Committee for the Thirty-First Meeting of the Scientific Committee

Appendix 1

List of Participants
The Thirty-First Meeting of the Scientific Committee

Note: Participants shown with light-blue highlighting are Online Viewers.

First name	Last name	Title	Position	Organisation	Postal address	Email
CHAIR						
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Commission for the Conservation of
Southern Bluefin Tuna

みなみまぐろ保存委員会

Report of the Extended Scientific Committee for the Thirty-First Meeting of the Scientific Committee

24 – 27 August 2026
Brussels, Belgium

The CCSBT would like to recognise the generous financial contribution provided by the European Union towards the costs of this meeting of the Scientific Committee and the Extended Scientific Committee.

Extended Scientific Committee
for the Thirty-First Meeting of the Scientific Committee
24 – 27 August 2026
Brussels, Belgium

Agenda Item 1. Opening

1.1. Introduction of Participants

1. The independent Chair of the Extended Scientific Committee (ESC), Dr Kevin Stokes, welcomed participants and opened the meeting. The Chair advised that discussion for some agenda items had commenced in advance by correspondence, and thanked participants for their cooperation with this arrangement. The Chair also expressed appreciation to the host Member, the European Union, for its substantial financial support in holding this meeting.
2. Each delegation introduced its participants. The list of participants is included in **Attachment 1**.
3. The Chair noted that the European Union and South Africa were not attending this meeting in-person.

1.2. Administrative Arrangements

4. The Executive Secretary announced the administrative arrangements for the meeting.

Agenda Item 2. Appointment of Rapporteurs

5. Australia, Japan and New Zealand provided rapporteurs to produce and review the text for the substantive agenda items.

Agenda Item 3. Adoption of Agenda and Document List

6. The Secretariat requested the addition of sub-agenda item "18.2. Common Oceans Tuna Project Workshop on Stock Assessment" to Other Business, in response to a request from ICCAT received on 31 July 2026.
7. The agreed agenda is provided at **Attachment 2**.
8. The agreed list of documents is provided at **Attachment 3**.

Agenda Item 4. Review of SBT Fisheries

4.1. Presentation of National Reports

9. The majority of discussion for this agenda item commenced by correspondence in advance of the ESC, with additional detail and follow-up queries provided by Members during the meeting.

10. The Chair noted that no national report had been received from the EU. In response to a question from the Independent Advisory Panel, the Secretariat reiterated the EU's previous advice that since the EU does not have a southern bluefin tuna (SBT) fishery, it does not target SBT, and further that it has not reported any by-catches of SBT in the relevant reporting period.

11. Australia submitted paper CCSBT-ESC/2608/SBT Fisheries-Australia. The 2024–25 SBT fishing season report summarised catches and fishing activities in the Australian Southern Bluefin Tuna Fishery (SBTF) up to and including the 2024–25 fishing season (1 December 2024 – 30 November 2025). Australia's allocation as agreed by the CCSBT was 7,295 t for the 2024–25 fishing season. However, this was adjusted to account for a set aside for the recreational sector and to account for undercatch in the previous fishing season, so the effective total allowable commercial catch was 8,010.5 t. A total of 45 commercial fishing vessels landed SBT in Australian waters in the 2024–25 fishing season for a total catch of 6,342 t. A total of 70.1% of the catch was taken by purse seine with the remainder taken by longline, pole-and-line, rod-and-reel and trolling. Five purse seiners fished off South Australia for the Australian farming operations during the 2024–25 fishing season, with live bait, pontoon-towing and feeding vessels also involved. The purse-seine fishing commenced in late December 2024 and finished in March 2025. Length-frequency data from the purse-seine fishery indicate a shift to smaller fish in recent years. Average lengths of SBT transferred to farms in South Australia declined from 96.4 cm in the 2016–17 season to 82.6 cm in 2024–25. In the 2024–25 fishing season, observers monitored 13.8% of purse-seine sets where fish were retained for the farm sector and 17.5% of the estimated SBT purse-seine catch. In 2025, the review rate for electronic monitoring (EM) footage of longline hook effort in the Eastern Tuna and Billfish Fishery (ETBF) in the areas of the SBT migration was 8.8 %. The review rate of longline hooks that actually caught SBT in the ETBF was 10.2 %. In 2025, the review rate for e-monitoring footage of longline hook effort in the Western Tuna and Billfish Fishery was 7.5 %.

12. Australia also submitted paper CCSBT-ESC/2608/15, that describes Australia's catch and effort data submission. On behalf of the Australian Government, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) has compiled aggregated catch and effort, catch by fleet, raised catch, catch at size, and non-retained catch for submission to the CCSBT. This has been compiled from a number of databases including the logbook database, catch disposal records and fisheries observer reports, collected and managed by the Australian Fisheries Management Authority (AFMA). The Australian catch of SBT from the surface (purse seine) fishery is also sampled by contracted field staff prior to release into farm cages. The sample data include size and weight measurements that are used to calculate representative size distributions and average weights. Delta tables[1] hosted in the Microsoft Azure Data Lake, Excel spreadsheets and Databricks notebooks are used to integrate and process the source data sets and create the data files required for the CCSBT data exchange. This report provides copies of data collection forms, as well as flow charts

[1] Delta table is an optimised storage table built on top of standard data files in the Microsoft Azure Data Lake.

illustrating the data integration procedures. The paper also describes the data validation procedures.

13. In response to questions on its national report, Australia advised that:

    - For the timing of the 300 otolith sampling/season for direct ageing to inform longline age composition, the Australian Fisheries Management Authority (AFMA) establishes priorities in respect to research relating to fisheries and arranges for the undertaking of such research. AFMA administers an annual budget for research that is prioritised and scoped through fishery advisory committees, which provide advice annually to AFMA's research committee. In accordance with AFMA's research plan, projects are prioritised and funded in accordance with the need, risk, cost and expected benefits of the research to the fishery, ecosystem, industry and broader community. This research is not currently a priority for research funding for the SBT fishery and Commonwealth fisheries generally. In the interim, AFMA is working with fish receivers in the longline sector of the SBT fishery to improve length data being collected for longline-caught fish to ensure that the data collected for longline fish remain as robustly representative as possible;
    - The decline of the average size of SBT transferred into farms in South Australia is thought to be due to an increase in the proportion of age 2 fish available to and being caught by the purse-seine sector of Australia's SBT Fishery (see figure 3, Report of SC30). Additional research would be required to confirm why less of the 3+ age classes have been available to the purse-seine fleet in recent seasons;
    - The successful rebuilding of the stock and increased quota likely account for the increase in catches, as well as fishing occurring in more areas as depicted in Figures 1-3 by the longline fishery; and
    - There are no plans for another national survey of recreational fishing for SBT at this time.

14. Indonesia submitted paper CCSBT-ESC/2608/SBT Fisheries-Indonesia. SBT are seasonally caught as bycatch by Indonesian tuna longline fleets operating in the Indian Ocean. This report summarised scientific information on the Indonesian tuna longline fishery related to SBT for the 2025 calendar year (1 January – 31 December 2025). The total reported SBT catch was 1,172 t, equivalent to 11,482 individuals. A total of 214 longline vessels, 9 handline vessels, and 1 troll line vessel interacted with SBT, with sizes ranging from 95–209 cm in fork length (cmFL, mean = 167.6 cm) in area 1 and 53–218 cmFL (mean = 167.8 cm) in area 2. Thirty-two observer trips were conducted, covering at least 4.14 % of hooks in areas 1 and 2.

15. In response to questions on Indonesia's national report:

    - On the potential sampling bias associated with operating the observer program with funding from the Fisheries Improvement Program (FIP), Indonesia advised that, although the observer programme is funded through the FIP, its implementation, including observer deployment and the payment of observer salaries and fees, is managed by an independent third party recognised by the Indonesian government. This arrangement is intended to ensure observer independence and minimise potential conflicts of interest. The Indonesian government also provides and oversees observer training to ensure that

observers meet the required competency and standards. Indonesia continues to monitor the implementation of the programme through to the reporting process;

- The biological data (i.e. length frequency data) are not provided in Indonesia's annual report, and instead they are presented in paper CCSBT-ESC/2608/12 Update on SBT Catch Monitoring and Biological Sampling in Indonesia.
- In relation to the limited coverage reported from artisanal fisheries, Indonesia advised that artisanal fisheries remain challenging and complex. Simplified logbook reporting has been introduced to allow fishers to report their catch. Indonesia has been strengthening the identification and monitoring of SBT catches from artisanal fisheries since 2023. These fisheries are mainly identified in three landing areas: Pondok Dadap, East Lombok and Cilacap. MMAF[2] involves the relevant fisheries port UPTs[3] in these areas in SBT governance activities, including dissemination and coordination, to improve the recording and reporting of artisanal SBT catches. Indonesia also consistently allocates 5 % of its national SBT quota to artisanal fisheries. Indonesia will continue to strengthen coordination with the relevant UPTs and stakeholders to improve the coverage and quality of catch data from artisanal fisheries and to ensure more complete reporting to CCSBT;
- For observer coverage, Indonesia advised that there was a significant reduction in the national budget allocated for the observer program and it may have to reduce observer coverage in 2026. However, Indonesia's tuna longline fishery is currently participating in a Fisheries Improvement Plan (FIP), which may provide an alternative funding mechanism to support observer activities. Any such funding arrangement is designed under DGCF[4] to ensure the independence, impartiality and integrity of the observer program, particularly in relation to data collection, reporting and compliance monitoring;
- To ensure compliance and to avoid exceeding its allocation, Indonesia has strengthened its SBT quota monitoring system. In mid-2026, Indonesia developed an SBT quota monitoring application to cross-check quota allocation, CDS[5] data and actual landings. Indonesia has also revitalised its SBT quota governance by allocating quotas twice a year directly to individual vessels, instead of through fisheries associations. This enables tighter vessel-level monitoring of quota utilisation and helps prevent exceeding of quota; and
- For monitoring SBT catch by artisanal fisheries, Indonesia advised that SBT catches from small handline and troll line vessels are reported through a simplified logbook. For 2024, all reported SBT catches from artisanal fisheries, involving 9 handline vessels and 1 troll line vessel, were captured under the CDS, although some delays in reporting were experienced.

16. Japan submitted paper CCSBT-ESC/2608/SBT Fisheries-Japan. This report described the Japanese commercial longline fishery for SBT for catch, effort, nominal Catch per Unit Effort (CPUE), length frequency, number of vessels and geographical distribution of fishing operations in 2025. In the 2025 fishing season, 61 vessels caught 7,458 t and about 152,000 individuals of SBT. Twenty-

[2] The Ministry of Marine Affairs and Fisheries
[3] Unit Pelaksana Teknis
[4] The Directorate General of Capture Fisheries
[5] Catch Documentation Scheme

one scientific observers were dispatched and observed 34.8 % of the hooks used in Area from 4 to 9.

17. Japan also submitted paper CCSBT-ESC/2608/BGD02 on the change in the operating pattern of Japanese SBT longliners in the 2025 fishing season. The Japanese longline data have been used as the most important scientific data for the stock assessment and Management Procedure (MP) of SBT tuna in CCSBT. It had examined the change of the operation pattern of the longline fishing in the most recent year compared to the past 10 years. No major change was evident in the 2024 operational pattern in terms of the amount of catch, the number of vessels, time and area operated, proportion by area, length frequency, release and discard, and spatial concentration of operations. The Japanese longline CPUE in 2025 is considered to represent the change of SBT stock abundance consistently, as in previous years. The increase in catch quotas over the last decade has had the greatest impact on the increase in CPUE, together with the expansion of operations in space-time and the increase in the number of operations to a lesser extent.

18. In response to questions about the high CPUE in 2025, Japan referred to paper CCSBT-ESC/2608/BGD02 and noted that a detailed examination of the operational patterns of the Japanese longline fishery revealed no major changes in 2025. Based on this result, Japan concluded that the Japanese longline CPUE in 2025 reflects changes in SBT stock abundance consistently as in previous years. Japan also did not recognise any major environmental changes as having occurred in 2025. While Japanese longline CPUE is a primary indicator, it is merely one of several indices of stock abundance. Consideration should be given to the stock assessment results that integrate multiple abundance indices and account for age structure.

19. Regarding the high catch in 2025, Japan advised that the figures do not reflect abundance because the total catch is capped by a Total Allowable Catch (TAC) in CCSBT. In addition to an increase in catch weight due to a carryover from the previous year, the number of fish caught increased further given a decrease in average size.

20. Korea submitted paper CCSBT-ESC/2608/SBT Fisheries-Korea. Korean longline fleets have engaged in fishing for SBT in the CCSBT convention area. This fishery commenced with a small experimental operation in the Indian Ocean in 1957, fishing mainly for bigeye tuna, yellowfin tuna and albacore tuna but shifted targeting SBT in 1991. In 2025, the SBT catch in calendar year of Korean tuna longline fishery was 1,495 t (1,495 t in fishing year) with 9 vessels active. In general, fishing occurs between 35ºS-45ºS and 10ºE-120ºE, in the western Indian Ocean (Area 9) from April to July/August and in the eastern Indian Ocean (Area 8) from July/August to December. However, since 2014 SBT fishing vessels have moved westward from previous years and mainly operate in the western Indian Ocean and eastern Atlantic Ocean between 20ºW-35ºE (Area 9). Until the early 2010s, the CPUE was low and since 2012 it has increased. In general, the CPUE in Area 9 is higher than in Area 8. In particular, during 2017-2019 there has been no fishing in Area 8.

21. New Zealand submitted paper CCSBT-ESC/2608/SBT Fisheries-New Zealand. As of January 2024, New Zealand successfully placed cameras onboard all surface longline fishing vessels and data collection for commercial fisheries is

now primarily occurring from electronic monitoring (onboard cameras and ER/GPR). For the 2025 calendar year, New Zealand's national allocation was 1,288 t. However, New Zealand was able to carry-forward the maximum 20 % allowed under the Resolution to Carry Forward Unfished Annual TAC of SBT, which equated to 257.6 t, so the effective TAC in 2025 was 1,545.6 t. Within New Zealand's national allocation of 1,288 t, there were the following allowances: a domestic total allowable commercial catch (TACC, which is the commercial allocation) of 1,197 t; a recreational allowance of 69 t; a customary non-commercial allowance of 2 t; and an allowance for other sources of fishing mortality caused by fishing of 20 t. For the 2024/25 fishing year, commercial removals of SBT were 680.2 t, and for the 2025 calendar year commercial removals were 679.6 t. Given no foreign charter vessels have fished for SBT in New Zealand since 2015, the entire commercial catch was taken by the domestic fleet. The total commercial catch was within the domestic allowance set by Fisheries New Zealand (1,197 t). Discarding of dead SBT can only lawfully occur when authorised by Fisheries New Zealand observers, or when predation has occurred such that the fish is no longer fit for human consumption (verified by onboard cameras). Previously, Fisheries New Zealand scaled observed discards of dead fish across total fishing effort assuming a similar rate on unobserved vessels despite the requirement for SBT discards to be authorised. However, the rollout of onboard cameras provides a high degree of confidence in fisher-reported data, noting that 91 % of surface longline hooks were covered by camera monitoring in 2025. Discard mortality for the domestic commercial fleet was 10 t based on 393 fisher-reported discards of dead SBT. Fishers must account for dead SBT discards with annual catch entitlement (ACE) which counts against their quota, and therefore discards are included in the calculation of commercial removals. In May 2024, an existing exception was reviewed and agreed which continues to allow for SBT to be returned to the sea if caught by surface long line or troll and is alive and likely to survive. Based on fisher reports, 919 SBT were released alive (20.98 t) in the 2025 calendar year. Life status of discards are monitored by onboard cameras. Recreational removals were estimated at 70.3 t, and there were no customary removals reported.

22. South Africa submitted paper CCSBT-ESC/2608/SBT Fisheries – South Africa. South Africa's tuna directed fishery is comprised of two fishing fleets, a baitboat (tuna pole-line) fleet of 139 vessels (131 fishing rights), and a longline fleet with a domestic (ZAD) and joint venture (charter vessel(s); ZAC) component of currently a total of 34 vessels (61 fishing rights). The tuna pole-line fleet targets mainly albacore and yellowfin tuna, when available, and the longline fleet targets tuna species (temperate and tropical) and swordfish. SBT has previously only been caught by the longline fleet but the tuna pole-line fleet started catching SBT in small quantities since South Africa became a full Member of CCSBT in 2016. South Africa continues to develop its SBT directed performance within its large pelagic directed fishing sectors. SBT effort in the ZAD has been steadily increasing over the period 2006-2016, from a mere 45 thousand hooks in 2006 to present levels of over 500 thousand hooks and a maximum of over 1,000 thousand hooks in 2024, whilst SBT targeting effort from ZAC effort was absent in 2020, 2022, 2023 and 2024 and only one vessel operated in 2021 and 2025. Similar to effort, total annual SBT landings reached a peak of 222 tons in 2018 and a maximum of 243 t in 2024. SBT was caught by fewer longline vessels in 2025 (18 ZAD, 1 ZAC) than the maximum seen in 2024 (27 ZAD vessels), and

four tuna pole-line vessels. ZAD longline vessels landed 224.8 t (n = 3329) and tuna pole-line vessels landed 1.66 tons (n = 18), in 2025. The longline fishery operates mostly within South Africa's EEZ from May to October; however, the majority of SBT catch is typically taken over a four-month period; June, July, August and September. There are notable differences in the distribution of catch and effort between the ZAD and ZAC longline vessels. The ZAD operates off the West coast of South Africa (Area 15 and upper Area 9) and in the Northeast Coast (Area 14) and the catch distribution appears to have become more localised and contracted in these two areas since 2019. The few (1-3) JP-flagged ZAC vessels that operated under joint venture in 2019 and 2021 operated in offshore positions in Area 9. The ZAC vessel of TW operated in the east and west Atlantic in 2025, catching SBT in the East (~ -5ºE). A recent increase in size composition data in 2024 is indicative of the increase in SBT catch and an improvement in observer coverage. Efforts made in 2023 has seen ZAD observer coverage increase to 13.9 % in 2023, 19.7 % in 2024 and 16.8 % in 2025. The 100 % observer coverage required on ZAC vessels assisted in measuring 31.2 % and 14.9 % of SBT caught in 2019 and 2021, respectively. Small sample sizes have resulted in large variability in mean lengths (between 133.7 cm and 192.5 cm) from 2020 to 2024 in Area 9. The mean lengths in Area 14 and 15 have been fairly similar over the last four years, 170.0 cm and 163.0 cm, respectively. A bimodal length frequency distribution in 2024 across the three Areas (9, 14, 15) can be largely attributed to vessel sampling bias.

23. Taiwan submitted paper CCSBT-ESC/2608/SBT Fisheries-Taiwan. Since Taiwan became a Member of the Extend Commission (EC) of the CCSBT in 2002, all SBT fishing vessels are required to be authorised to access this fishery, and the authorisations are reviewed and renewed by Fishery Agency of Taiwan (FA) annually. In 2025, 52 fishing vessels were authorised to fish for SBT, which consisted of seasonal target vessels and bycatch vessels, and the SBT catch was 1,594 tons for calendar year and 1,583 tons for quota year. Observers were sent onboard SBT fishing vessels for collection and recording of detailed information on catch and effort of fishing operations. In the 2024 calendar year, 17 observers were deployed on 17 of the 52 fishing vessels authorised to target SBT seasonally, including two vessels operating in the Pacific Ocean; and 1 was deployed on 1 of the 5 fishing vessels authorised to bycatch SBT with 3,073 days observed out of 3,774 fishing days. And 16 observers were deployed on 16 of the 50 fishing vessels authorised to target SBT seasonally, including one vessel operating in the Pacific Ocean in 2025. There were 2,838 fishing days with 2,603 days observed. In 2024, the coverage rate of observation was 31.58 % by vessels, 13.35 % by hooks and 16.55 % by catch. The coverage rate accounted for 30.77 % by vessels in 2025, 12.84 % by hooks, and 14.68 % by catch. To effectively conduct monitoring, it is necessary for FA to consider the sustainable development observer program and budget to reduce the influence of fishing vessels changing, which may influence the coverage rates. In recent years, Taiwanese SBT fishing vessels mainly operate in the IOTC area, and partial SBT bycatch vessels operate in the ICCAT and WCPFC area. Therefore, the FA has adopted the conservation management measures/resolutions/recommendations of all tuna Regional Fisheries Management Organisations (tRFMOs) into domestic fishery regulations, and these become mandatory obligations for our fishing fleet.

24. Taiwan also submitted paper CCSBT-ESC/2608/34, which describes preparation of Taiwan's SBT catch and effort data submission for 2025. The SBT fishery data submitted to the EC of the CCSBT from Taiwan includes total catch by fleet, aggregated catch and effort, catch-at-size, catch-at-age and non-retained catch data. The data submitted is compiled from the electronic logbook (e-logbook) data and catch documentation scheme (CDS) data collected from authorised SBT fishing vessels with cross checking against VMS data, observer data and traders' sales records. There were no discrepancies found among datasets on catch.

4.2. Secretariat Review of Catches

25. Discussion for this agenda item commenced by correspondence in advance of the ESC.

26. The Secretariat paper CCSBT-ESC/2608/04-Rev1 provided an update of the reported SBT global catches and the spatial distribution of catch and effort, as well as the distribution of reported Non-Member effort in areas near where SBT are caught. The paper shows that the estimated total reported catch for the 2025 calendar year was 19,488 t, an increase of 891 t or 4.8 % from the 2024 calendar year. The global reported SBT catch by flag is shown in **Attachment 4**. The paper also includes comparisons of global adjusted TAC against reported catch by fishing season, which showed that reported catch was less than the adjusted TAC by 2,193 t for the 2025 fishing season. The paper also noted that Indonesia exceeded its Total Available Catch[6] for the 2020 fishing season by 456.6 t. CCSBT 28 agreed that Indonesia will repay this amount by reducing its Total Available Catch by 91.3 t for each of the 2022-2026 fishing seasons.

Agenda Item 5. Report from the Sixteenth Operating Model and Management Procedure (OMMP) Technical Meeting

27. The Chair of the Operating Model and Management procedure Technical Group (OMMP), Dr Ana Parma, briefly reviewed the progress made during the 16th OMMP Technical Meeting (OMMP 16) and intersessionally. The OMMP 16 was held in Seattle in June 2026 as a hybrid meeting. Short summary sessions were held daily to report progress to online participants. The main purposes of the meeting were to prepare for the stock assessment to be presented at this ESC, and to continue training Members in the use of the new SBT software developed by Dr Darcy Webber.

28. The OMMP Chair recalled that a research project was initiated in 2023 to develop a new code for the SBT operating model (OM) with the goal of using it to conduct the full stock assessment this year and for future MP evaluations. The project was successful, and the new code developed in R-TMB allowed for a very efficient implementation of several new features, including:

[6] "Total Available Catch" means a Member's Effective Catch Limit allocation for that quota year plus any amount of unfished allocation carried forward to that quota year. Effective Catch Limit is the Member's allocation plus any adjustments for agreed short-term changes to the National Allocation.

- the use of Markov Chain Monte Carlo (MCMC) methods to evaluate parameter uncertainty within each grid cell in addition to the uncertainty across the grid;
- improved formulations of fishery selectivities and natural mortality;
- inclusion of separate selectivities at age for CPUE predictions estimated by fitting a series of Japanese longline length-frequency data calculated by weighting the raw data by CPUE;
- alternative options for some likelihood components and improved representation of Parent-Offspring-Pairs; and
- new diagnostics to evaluate fits.

29. The group reviewed data inputs in particular the Japanese and Korean CPUEs, and endorsed the conclusion from the Japanese analysis that the strong increase observed in the standardised index was robust to a variety of sensitivity analyses. It recommended that Korean CPUE be included as a separate index in future assessments.

30. Substantial efforts were devoted during the meeting to evaluate the weights assigned to the different likelihood components in the assessment by examining the normalised sum of squares of the One-Step-Ahead residuals implemented in the new code. When selecting weights, the WG prioritised the quality of fits to the abundance data over the fits to the age and size compositions.

31. The group considered the structure of the new reference set, which now consists of a reduced grid of 9 models defined by the combination of 3 values of steepness and 3 values of Psi, the power parameter for relative reproductive contribution by age. All natural mortality parameters are now estimated together with the remaining model parameters, instead of fixing them at discrete values as was done in the grid of 108 models used in the 2023 assessment.

32. The assumptions for the projection code were also discussed and specified, including how to simulate recruitment deviations, selectivities and data inputs for implementing the Cape Town Procedure (CTP) in stock projections.

33. Finally, the group specified a set of sensitivity runs designed for different purposes: (1) to evaluate the impact of using alternative data inputs (no UAM scenarios) or assumptions (e.g., nonlinear relationship between CPUE and abundance, degree of flexibility of selectivity for the Indonesian fishery), (2) to evaluate the information content and influence of different data sources (e.g., exclusion of different data components or data points), (3) to evaluate the impact of using MCMC instead of the discrete grid approach, and (4) to allow for alternative allocations between fisheries in projections. These sensitivity runs were conducted intersessionally.

34. Full details of the outcomes from OMMP 16 can be found in paper CCSBT-ESC/2608/Rep01.

35. The ESC noted that, in response to a question about how the new model structure deals with uncertainty in remaining grid elements, this issue will be handled directly under the stock assessment agenda item.

36. Indonesia expressed their gratitude with the inclusive environment within the OMMP, and the ESC chair endorsed the operational success of this group in both technical and capacity building terms.

Agenda Item 6. Actions Under the CCSBT Strategic Plan

6.1. Report back against the objectives of the Strategic Plan

37. Discussion for this agenda item commenced by correspondence in advance of the ESC.

38. The Chair advised that the CCSBT Strategic Plan, adopted in 2023, states that "Subsidiary bodies holding responsibility for particular action items are expected to report back on the progress of those activities as part of their respective meeting reports".

39. The Secretariat introduced paper CCSBT-ESC/2608/05 on the Report against the CCSBT Strategic Plan 2023-2028. In this paper, the Secretariat provided the ESC's previous report, along with updates from the Secretariat's perspective, and outlined the suggested approach to facilitate the ESC's review process this year.

    The ESC updated the report to reflect progress made and the next steps for action items assigned to the ESC. The agreed report from the ESC on Progress Against Strategic Plan is shown in **Attachment 5**.

6.2. Capacity Building Workplan

6.2.1. Capacity building needs assessment

40. Discussion for this agenda item commenced by correspondence in advance of the ESC.

41. Members were reminded of the CCSBT's Capacity Building Workplan, which aims at prioritising needs and delivering effective capacity building initiatives to improve performance in key areas, particularly for developing Members.

42. The Secretariat presented paper CCSBT-ESC/2608/06 on Capacity Building Needs Assessment in the context of CCSBT's science area. In this paper, the Secretariat and the Chair updated their initial assessment and preliminary recommendations related to the Capacity Building Workplan's *Objectives 1: Improve Data Collection* and *2: Improve Scientific Analysis*, and maintained the same conclusion that current efforts aimed at improving data collection and scientific analysis are sufficient, highlighting the role of the Meeting Participation Fund (MPF) and live streaming of the meeting proceedings. The Secretariat also noted the various capacity building opportunities already provided through various science projects, such as the training in the use of the new sbt software during the OMMP 16 meeting. The Chair invited Members to evaluate the current status and preliminary recommendations presented in this paper.

43. The meeting discussed the potential need to review where data gaps currently exist and whether these gaps present a risk, particularly in some of the larger ageing data sets. Discussions also suggested a need to ensure that funding results

in sustained improvements, with some Members also highlighting the budget constraints.

44. The ESC supported the initial assessments and preliminary recommendations from the paper, and also encouraged the continued support of current capacity building initiatives including the MPF.

6.2.2. Potential capacity building projects

45. Discussion for this agenda item commenced by correspondence in advance of the ESC.

46. The Chair advised that this agenda item provides an opportunity for Members to consider the specific capacity building initiative or project activity based on the needs identified under Agenda item 6.2.1, and that the ESC needs to identify priorities for targeted engagement, specifying area, issue and urgency for the capacity building initiative for the EC's consideration.

Possible capacity building activity on otolith ageing in South Africa

47. South Africa submitted paper CCSBT-ESC/2608/39, which proposed the Introductory workshop to otolith-based ageing of SBT in 2027. A workshop was proposed to open to all CCSBT Members with new or developing SBT otolith readers requiring introductory training in otolith preparation, reading and age estimation, noting the June 2025 workshop was designed for scientists that are already trained and actively ageing SBT otoliths. This workshop would comprise a single 3-day in-person training course in Australia and include Fish Ageing Services and CSIRO Environment. CCSBT Secretariat funding of AU$40,000 would be required. South Africa noted that hosting the workshop in 2027 would be valuable as South Africa has commenced otolith sampling and slide preparation, the samples include larger individuals (>160cm FL) which could contribute valuable age estimates for larger SBT, and participation in the workshop would also support South Africa's objective of developing the necessary technical capacity to comply with the CCSBT Scientific Data Exchange requirements for the submission of Direct Ageing Data.

48. Members recognised the importance of developing skills to make use of this technology but suggested that savings could be made by holding an online workshop in the first instance. The need for in-person training was clarified. A revised proposal was developed, which will target the activity to South Africa and utilise the opportunity presented by South Africa's hosting of next year's ESC in order to reduce costs. The resourcing requirements of this revised proposal will be included in the workplan and the decision whether to support South Africa's proposal will depend on the outcome of budget discussions at the Finance and Administration Committee.

Capacity building project to strengthen capacity to assess SBT landing across Indonesia ports

49. The Chair recalled that, in 2025, the ESC considered a potential capacity building project to strengthen the capacity to assess SBT landing sites across Indonesian ports and recommended that this project be conducted in 2026, but the EC did not approve this due to budget constraints. Instead, it was agreed that Australia

would undertake to work with Indonesia to consider alternative sources of funding for this work. The ESC agreed to discuss this next year.

Agenda Item 7. Review of results of the Scientific Research Program and other inter-sessional scientific activities

7.1. Results of scientific activities

50. Some discussion for this agenda item commenced by correspondence in advance of the ESC, but all papers were presented and discussed. Papers were presented in the following non-numerical order, so as to group related topics together.

51. Paper CCSBT-ESC/2608/10 provided an update on the Gene-tagging recruitment monitoring program 2026. The CCSBT SBT gene-tagging program provides an estimate of the absolute abundance of the age-2 cohort, for use in the CTP and stock assessment models. The program has been running since 2016. Since the last ESC, the project has completed genotyping of the 2024 releases and 2025 harvest samples to provide an estimate of age-2 abundance in 2024 for use in this year's stock assessment. CCSBT has also completed another year of tagging and harvest sampling that will provide abundance data in future. From the 38.8 million comparisons of genotypes from 3,522 age-2 fish tagged and released in 2024 and 11,011 age-3 fish sampled during harvest in 2025, only 11 matches were detected. The estimate of abundance is 3.53 million fish, which is the highest abundance estimate in the series. Correspondingly, the precision of the estimate is reduced, with CV of 0.3. The OMMP review of the data for the stock assessment agreed that this higher CV is not a concern and is expected with higher abundance (given unchanged sample sizes). The next abundance estimate will be available in 2027, from tagging completed in 2025 and harvest sampling completed in 2026.

52. CSIRO responded to questions regarding clarification by stating that releases are consistently carried out in March, to ensure that the fish are not caught in the same year after commercial fishing has ended, that they are confirmed to be age-2 fish by examining the size range, and that age-3 fish are sampled from fish farming processing plants. Regarding concerns about the impact of the shift to younger fish on sampling, they responded that age-3 fish are being sampled sufficiently and there are currently no associated problems. Regarding the lower number of individual matches over the past two years, they responded that the assessment shows that there are no statistical inconsistencies.

53. Paper CCSBT-ESC/2608/11 provided an update on the SBT close-kin tissue sampling, processing and kin-finding 2026. The close-kin mark recapture (CKMR) project is an ongoing monitoring program that provides data on the adult component of the SBT population for use in the CTP and stock assessment models. Muscle tissue samples collected from harvested juvenile SBT in Australia in 2024 were subsampled, and DNA was extracted and sequenced. The kin-finding analysis to identify parent-offspring pairs (POPs) and half-sibling pairs (HSPs) was updated to include the new juvenile data (n = 1135 new samples after quality control checks). The results were provided to the CCSBT in May 2026. A total of 123 POPs and 230 high-confidence HSPs have now been identified, with a false negative rate for the HSPs of 0.32 (the same as last year).

Note the number of POPs has declined by two compared to last year's analysis (Farley et al. 2025a), because no new POPs were identified and two previously-deemed POPs were identified as most likely being full-sibling pairs (FSPs) using more powerful POP-finding statistics. Between September 2025 and May 2026 (2025/26 spawning season), muscle tissue samples were collected from 5,306 adult SBT in Indonesia. This is well above the usual annual target of 1,500 samples and in line with the proposed number for this season to compensate for low coverage in previous years. It represents a marked increase from previous years and improves coverage for the adult population in close-kin analyses. CSIRO[7] and BRIN[8] have progressed development of a Material Transfer Agreement (MTA) to enable transport of the tissue samples collected since 2022/23 to Hobart for genotyping. It is anticipated that the genotyping and kin finding will be completed for the 2027 and 2028 CCSBT data exchange. The 2026 sampling of 1,600 juvenile SBT in Australia has been completed.

54. In response to questions, CSIRO advised that:

- When searching for Parent-Offspring Pairs (POPs), CSIRO has moved from using the previous exclusion statistic to a more powerful Pseudo-Likelihood Odds ratio (PLOD) statistic. The reasons are twofold:
  - The PLOD approach is statistically more powerful than the exclusion method and, as CSIRO gradually collect more data and make more comparisons, this approach will make sure that the likelihood of any false-positive Unrelated Pairs (UPs) being mis-identified as POPs is extremely low; and
  - The PLOD approach can also be used to look for Full-Sibling Pairs (FSPs). These, like POPs, are first-degree relatedness types, and can be hard to tease apart using the exclusion statistic. Now, CSIRO can check all potential POPs using the FSP PLOD statistic to check their true nature and further strengthen the reliability of the data being used
- When searching for Half-Sibling Pairs (HSPs), CSIRO have been using the PLOD approach from the start. For this data set there has been a well-established statistical process for identifying the false-positive threshold in the PLOD statistic above which CSIRO can be sure there will only be HSPs, not any third-degree or fourth-degree related pairs such has half-thiatic (HTP) and half-cousin (HCP) pairs, respectively. CSIRO then calculates the probability with which a true false-negative HSP will have a PLOD below this critical value, and this is used in the assessment to scale the HSP probability in the CKMR HSP likelihood appropriately. This approach is robust, but the continually increasing number of comparisons being made as the data set grows means this false-positive threshold needs to become stricter each time CSIRO updates the data. Eventually CSIRO will be discarding more than half the true HSPs, and CSIRO has two proposed approaches to address this issue:
  - Instead of comparing all juveniles to all the others, CSIRO groups the comparisons into cohort groups (e.g. all animals born in 2003 compared to all animals born in 2004). CSIRO obtains false-positive criteria for each grouping, and associated false-negative probabilities that can then be used in the CKMR model. This works by reducing the strictness of the false-

[7] Commonwealth Scientific and Industrial Research Organisation
[8] National Research and Innovation Agency of Indonesia

positive threshold (purely because CSIRO does less comparisons within a grouping vs. all together) and hence will result in more data being retained.
    - At present CSIRO does not make any use of the genetic linkage information of all the SNPs used in the SBT genotyping data set. SNPs that are located close together on a particular chromosome will be more likely to co-inherit than those that are further apart or on different chromosomes. By building a genetic linkage map on each chromosome, CSIRO can use this information to add substantially more power to the kin finding statistic. This will mean that the separation of UPs from HSPs, in terms of the kin finding statistic, will be far greater and will require a much less strict false-positive threshold for the HSPs; this will ensure CSIRO retain more data
- The combination of these two approaches should make a substantial difference to the fraction of true HSPs which CSIRO can retain in the data set going forward in the medium to long-term.

55. Indonesia advised that it would send biological samples when the Material Transfer Agreement is signed.

56. Paper CCSBT-ESC/2608/12 provided an update on SBT catch monitoring and biological sampling in Indonesia. Monitoring the size and age structure of SBT in the Indonesian longline fishery began in the early 1990s and is a key component of CCSBT assessments of spawning stock status and provides critical data for CKMR analyses. In 2021/22, the monitoring program was disrupted due to a combination of COVID-19 impacts and institutional restructuring within Indonesia, and in 2023, the CCSBT supported a collaborative capacity-building project to restore monitoring activities. Sampling remained low through 2023/24 but increased substantially in the most recent sampling season (2025/26). During this season, 5,342 SBT were measured, muscle tissue was collected from 5,306 fish for CKMR, and otoliths were collected from 3,051 fish for age estimation, highlighting the successful rebuilding of monitoring capacity. The size distribution in 2025/26 was similar to that observed in the most recent well-sampled year (2020/21), with a mean of 162 cmFL. Muscle tissue and otoliths collected since 2022/23 remain in Indonesia pending completion of a Material Transfer Agreement to facilitate their transfer to Hobart for analysis, which is expected to contribute to the 2027 CCSBT data exchange.

57. In response to questions, CSIRO advised that:

    - The sample size was 5,000 individuals in 2025, but it is planned to be reduced to 1,500 individuals from 2026 onwards; and
    - The cause of the significant change in length composition over the past two decades is unknown.

58. A Member noted that while evidence of spatiotemporal changes in the fishing has emerged, it will be necessary to understand the details. Another Member questioned why the mean length has not increased despite the increase in the spawning stock.

59. CSIRO clarified that the stock assessment looked at catch numbers by age, and did not use size composition.

60. Australia presented paper CCSBT-ESC/2608/16 which provided an update on Australian otolith collection and ageing in 2026. This report provided an update

on the SBT otolith collection and ageing activities in Australia in 2026. Otoliths from 173 SBT caught in the Great Australian Bight (GAB) by the purse seine fishery in 2025 were received and archived in CSIRO's hard-parts collection. Age was estimated for 100 of these fish and the data were provided to the CCSBT in April 2026. An additional 162 sets of otoliths were collected in 2026. CSIRO continues to develop epigenetic ageing methods for tuna, including a new research collaboration with Diversity Arrays Technology (DArT). If successful, this approach could significantly improve the workflow and efficiency of applying epigenetic ageing methods within the CKMR program.

61. Australia presented paper CCSBT-ESC/2608/17 which provided an update on e-tagging activities 2026. CSIRO has been conducting satellite tagging of juvenile SBT in the Great Australian Bight (GAB) in order to understand if the habitat and distribution of these fish has changed relative to observations collected from previous electronic tagging programs. The work (funded by FRDC[9] and CSIRO) is also examining oceanographic trends in the GAB which may drive changes in distribution of SBT. The data analysis component of the project was paused to enable more summer tag deployments, and the project has been extended until the end of 2027. The aim for remaining period of the project is to deploy tags from recreational or charter vessels immediately prior to or during the Australian surface fishery activities. The project requests 1t Research Mortality Allowance to cover any incidental tagging mortality in the upcoming summer of 2026/27.

62. Japan presented paper CCSBT-ESC/2608/23 about the scientific trolling survey that provides the data for the recruitment index of age-1 SBT, which was carried out in February 2026. Japan reported that they had surveyed an area extending from Esperance to Albany, including Bremer Bay with seven repetitions of the piston line. A total of 252 SBT had been caught during the survey. 101 SBT individuals were released with archival tags inserted, and the stomach contents of 121 fish, including SBT, were analysed. Oceanographic observations were also conducted at 14 locations using CTD. The paper noted that age-0.3 fish dominated in 2026 as was the case in 2024, which suggests a possible shift in the distribution by age and migration patterns of SBT.

63. Japan presented paper CCSBT-ESC/2608/24 concerning a research project to investigate the distribution of small age-0 fish (< 25cm fork length) along the west coast of Western Australia. This project started in 2019, and the fifth survey was conducted in the waters near the Houtman Abrolhos Islands, a location further south than previous survey sites. Over a 10-day period, 91 SBT measuring 30 - 46 cmFL were collected. The size of fish corresponded to two distinct spawning peaks. Twenty-five individuals had archival tags inserted and were then released.

64. Japan expressed its gratitude to AFMA for their cooperation in promptly granting permission for the trolling survey and the age-0 fish survey.

65. Japan presented paper CCSBT-ESC/2608/25, which described the calculation of the recruitment index covering a period of 20 years, from 1996 to the present, from the trolling catch data obtained on the scientific recruitment monitoring surveys for the age-1 SBT off the southwestern coast of Australia. The paper provided updated indices by adding the 2026 survey data. The piston-line trolling

[9] The Fisheries Research and Development Corporation.

index (TRP) was derived from catch per 100 km search distance on a predetermined transect line (called the piston-line) without any model-based standardisation. The grid-type trolling index (TRG) was calculated based on data from a wider area and standardised by the generalised linear model using a delta lognormal approach. This showed that the TRG in 2026 had decreased compared to 2025, and was 82 % of the 29-year average.

66. Japan presented paper CCSBT-ESC/2608/26. This reported that Japan has been inserting archival tags to SBT during the trolling surveys and that 101 and 25 of SBT individuals were released with archival tags in the trolling survey and the age-0 distribution survey, respectively, in 2026. Japan asked Member scientists to assist if there are any reports of recaptures.

67. Japan submitted paper CCSBT-ESC/2608/BGD02 on change in operation pattern of Japanese SBT longliners during the 2025 fishing season. The Japanese longline data have provided the most important scientific data in the stock assessment and MP of SBT in CCSBT. The paper examined the change in the operation pattern of the longline fishing in the most recent year to the past 10 years. No major change was evident in the 2024 operational pattern in terms of the amount of catch, the number of vessels, time and area with operation, proportion by area, length frequency, release and discard, and spatial concentration of operations. In summary, the Japanese longline CPUE in 2025 represents the change in SBT stock abundance consistently as in previous years. The increase in catch quotas over the last decade has had the greatest impact on the increase in CPUE, with the expansion of operations in space-time and the increase in the number of operations impacting to a lesser extent.

68. Japan submitted paper CCSBT-ESC/2608/BGD03, which provided an update of CPUE abundance index using GAM for SBT in CCSBT (GAM22) up to the 2025. At ESC 27 in 2022, this new method of calculation of the abundance index of SBT, which was standardised via a generalised additive model in the two-step delta log-normal approach with area weighting, had been agreed. The CPUE abundance index (GAM22) was updated for fishery data up to 2025 according to this agreed methodology. This paper presented the base case results as well as the results of various sensitivity tests. The index value increased in 2025 from 2024 and reached its highest value since 1969. The abundance index was robust to a variety of sensitivity analyses, including model selection, retrospective analysis, and age range changes.

69. Japan submitted paper CCSBT-ESC/2608/BGD04 on a proposal for a method for checking abundance indices obtained from CPUE. CCSBT has been using an abundance index derived from the CPUE of Japanese longline fisheries for the stock assessment and the MP applied to calculate the TAC. The history of abundance indices based on longline CPUE is long, and the standardisation model and data handling have changed over time. In recent years, due to the problem of a sharp increase in the abundance index value in 2018, the standardisation model was improved, and the current GAM22 model was adopted. The reason for the large 2018 abundance index value was that an extremely high outlier was estimated for a grid cell in time and space without actual operations. Although GAM22 currently provides robust abundance index values, in order to obtain reliable abundance index values in the future, a new

diagnostic method focusing on CPUE predictions for time and space calls without operations has been developed.

70. Korea presented paper CCSBT-ESC/2608/30 on Korean SBT otolith collection activities in 2025. To investigate the age and growth of SBT, Korea collected 85 otolith samples in 2025, bringing the cumulative total to 1,360 samples collected since 2015. The relationship between fork length (FL) and total weight (TW) was $TW=8E\text{-}05 \times FL^{2.713}$ ($R^2=0.916$). The von Bertalanffy's growth parameters estimated from the non-linear method using length-at-age data were $L_\infty=177.8$ cm, $K = 0.182$/year, $t_0 = -1.296$ years.

71. Korea presented paper CCSBT-ESC/2608/31 on a comparison of standardised SBT CPUE indices between Korea and Japan. At OMMP 16, the meeting requested that a comparison of the Japanese and Korean indices for Areas 8 and 9 be conducted for discussion at the ESC. In this study, SBT CPUE indices (1996-2025) between Korean and Japanese tuna longline fisheries were analysed and compared. As a result of the comparison analysis, standardised SBT CPUE indices between Korea and Japan showed very similar increasing trends in Area 9. The OMMP 16 recommended that Korean CPUE be included as a separate index in future assessments.

72. In response to a question regarding differences in CPUE trends between two fleets in Areas 8 and 9, it was noted that Area 8 reflects some variability. There were years when Korean vessels did not operate, or a few vessels operated due to changes in fishing strategy, making the data less reliable compared to the comparison in Area 9.

73. Further discussion was held within the CPUE small group, and their outcomes are reported under Agenda item 12.2.

74. Korea submitted paper CCSBT-ESC/2608/BGD05 on data exploration and CPUE Standardisation for the Korean SBT longline fisheries (1996-2025). In this study, Korea standardised SBT CPUE from Korean tuna longline fisheries (1996-2025) using Generalised Linear Models (GLM) with set by set (operational) data. The data used for the GLMs were catch (number), effort (number of hooks), number of hooks between floats (HBF), fishing location (5° cells), and vessel identifier by year, quarter, and area. Korea explored CPUE by area and identified two separate areas (Areas 8 and 9) where Korean vessels have targeted SBT. SBT CPUE was standardised for each of these areas. Korea applied two alternative approaches, data selection and cluster analysis, to address concerns about changes in targeting over time that can affect CPUE indices. Explanatory variables for the GLM analyses were year, month, vessel identifier, location (5° cells), number of hooks, and targeting (HBF and cluster). GLM results for each area suggested that year, month, location, and targeting effects were the principal factors affecting the nominal CPUE. The standardised CPUEs for both areas decreased up to the mid-2000s and have shown an increasing trend since.

75. Taiwan presented paper CCSBT-ESC/2608/35 on the gonadal information and histological analysis of Southern Bluefin Tuna collected by Taiwanese scientific observer program with updated data. Gonadal samples of SBT were collected by Taiwanese scientific observer project operating in the Indian Ocean. Over 1,600 samples were collected from 2010 to 2025, including 781 females and 871 males. The fork lengths of both sexes primarily ranged from 90 to 150 cm. The variation

of the monthly gonado-somatic index (GSI) showed that highest peaked in April and gradually declined thereafter, with elevated values observed from May to July in female. In males, GSI peaked in March and then decreased steadily. Overall, the monthly GSI patterns for both sexes were consistent with updated data. There were 1085 histological SBT samples collected from 2010 to 2024 including 584 females and 501 males were classified by sexual maturity stage. The majority of these samples were diagnosed as immature status for both sexes, while approximately 14.9 % in females and 8.6 % in males were identified as mature. Most of mature individuals were reproductively inactive. Also, most of the mature females were diagnosed to be in the regressed or regenerating stage (Stage 7) during the period from April to August.

76. Taiwan presented paper CCSBT-ESC/2608/36 on CPUE standardisation analyses for Southern Bluefin Tuna based on the Taiwanese longline fishery data from 2002 to 2025. The CPUE standardisation analyses were conducted using statistical data from the Taiwanese longline fleet covering the period 2002–2025. The fishing operations of large-scale Taiwanese longliners were primarily distributed in the Indian Ocean south of 20°S. For the CPUE standardisation analyses, the Indian Ocean was divided into two fishing areas using 60°E as the boundary: the central-eastern area (Area E), which represents the primary fishing ground, and the western area (Area W), which serves as a secondary fishing ground. Following the CPUE standardisation procedure for both areas, cluster analysis was first applied to identify fishing-targeting strategies and to develop data filters for subsequent analyses. Subsequently, a simple delta-lognormal model without interaction terms was adopted to minimise potential confounding effects associated with interactions in the CPUE standardisation process. The standardised CPUE results indicated an increasing trend both in Area E and Area W in 2025 after incorporating the updated data. The retrospective analyses showed that the overall patterns of standardised CPUE trends in both fishing areas remained consistent patterns with those observed in previous analyses.

77. Taiwan presented paper CCSBT-ESC/2608/37, which provided the updated ageing data of the SBT caught by Taiwanese longliners in 2024. This document presented updated otolith direct ageing data for SBT (n = 515) caught by Taiwanese longline fishery in 2024. Ageing protocols followed the established manual (Anon 2002) and the recommendations from the 2nd CCSBT otolith workshop held on 26 June 2025. Samples were primarily collected during the peak Taiwanese fishing season in June (39 %), July (22.7 %) and August (28.5 %). The remaining samples were caught in January (6.6 %), April (1.4 %), May (1.4 %) and September (0.6 %). The fish were mainly harvested in the central Indian Ocean between 30º-35ºS and 70º-90ºE. The sampled SBT had a mean fork length of 103.8 ± 12.8, ranging from 77-162 cm. Dressed weight ranged from 7 to 68 kg, with the majority of samples weighting between 15 and 25 kg. Direct ageing revealed an age range of 2 to 15 years, with a mean age of 3.5 ± 1.2 years. The 3+ age group was the dominant age class (49.5 %), followed by the 4+ (30.7 %) and 2+ (10.7 %) classes. Decimal ages were calculated according to Eveson et al. (2004), assuming a SBT birthday of January 1st and otolith opaque zone completion on September 30th. When fitted to von Bertalanffy growth function, both the discrete and decimal age data yielded similar growth parameters.

7.2. Maintenance and development of OMMP Code

78. The CCSBT's OMMP consultant, Dr. Darcy Webber, provided an update on the progress of the OM coding project since the ESC 30 meeting last year. The OMMP 16 meeting held in June 2026 reviewed changes to the sbt model and the newly developed projection code and had a first look at the evaluation of uncertainty calculated using MCMC compared to results obtained by sampling the old reference set of models.

79. Over the past three years, the "Maintenance and development of OMMP Code" project involved a complete redevelopment of the assessment model in RTMB, providing a faster, more transparent, and reproducible framework for scientific advice.

80. The work included extensive testing against the previous assessment, improved treatment of key biological and structural uncertainties, and implementation of both maximum-likelihood and Bayesian inference.

81. The model, supporting data systems, documentation, and reproducible assessment workflows are now in place, providing a strong foundation for future assessments and further methodological development.

82. Towards the end of this meeting, a version of the software will be frozen to help with reproducibility of the assessment in the future.

83. ESC 31 therefore marked both the completion of the project and the transition of the new framework into routine use and ongoing maintenance in the future.

84. The OMMP Chair suggested the need for a small group to form that would look at how the various parts of the software interact.

85. It was suggested that some additional training on using the model should be considered. Time was made available immediately following the ESC and the group was able to make good progress.

7.3. Update on NCNM estimates of unaccounted (fishing) mortality

86. It was recalled that, as a part of the SRP, ESC 30 agreed to conduct a simple update of estimates of unaccounted mortality (UAM) by Non-Cooperating Non-Members (NCNM) for the planned stock assessment in 2026.

87. The CCSBT Consultants, Dr Charles Edwards and Dr Simon Hoyle, provided paper CCSBT-ESC/2608/BGD01 on Estimates of unreported SBT catch by CCSBT Non-Cooperating Non-Member states between 2007 and 2023. Stock assessment and management of SBT require knowledge of the total catch. Non-Cooperating Non-Members (NCNM) of the CCSBT do not report SBT catches to the Commission, and estimates of this unreported catch are required. This has been achieved (CCSBT-ESC/1609/BGD02/Rev.1; CCSBT-ESC/1909/33; CCSBT-OMMP/2006/04; CCSBT-OMMP/2306/07) by fitting a two-part statistical model to the CCSBT catch rate data, and using the fitted model to predict the catch from Non-Member effort data collected by the other relevant tuna RFMOs (the Indian Ocean Tuna Commission, the International Commission for the Conservation of Atlantic Tunas and the Western Central Pacific Fisheries Commission). For the current iteration of the work, the same model used for CCSBT-OMMP/2306/07, without any further development, was applied to

updated data from the period 2007 – 2023. Non-Member catches were estimated under assumed catch rates equal to those of either the Japanese (JP) or Taiwanese (TW) fleets, adjusted for spatial and temporal covariates, representing target and non-target SBT fisheries respectively. Catch estimates under each of these assumptions were taken to represent a range of possible values. Using the updated data, Non-Member catch was estimated to have fluctuated around 1,000 t since 2018, which is consistent with previous estimates. Improvements to the approach have been suggested; in particular, the development of a model better able to account for spatio-temporal patterns in the data. The authors have also noted that the JP and TW fleets have very different spatial distributions, and that fleet-specific catchability effects estimated by the model may not be fully separated from the underlying SBT biomass distribution. If this is the case, then the application of a fleet-specific catchability term to spatio-temporal strata where the fleet would not typically fish, is questionable, and could be revisited in future work.

88. The ESC expressed its appreciation to Dr Charles Edwards and Dr Simon Hoyle for undertaking this important work, which is essential to the SBT full stock assessment.

89. It was noted that:

- The UAM scenario used for the 2026 stock assessment is "Adj(JP)".
- In 2022, the UAM may have exceeded 2,000 t, which is close to the level under which the MP was tested
- Most of the UAM is predicted to have come from the Indian Ocean in CCSBT statistical areas 2 and 14.

90. The ESC supported the outcomes of the project.

7.4. Terms of Reference of the MP Review in 2027

91. The ESC recalled that, following the Metarules for the CTP, the ESC is required to conduct a review of the MP every six years, including a review of the performance of the MP and, on the basis of the review, to determine whether the MP is on track to meet the rebuilding objective or whether a new MP is required. Under the Metarules, the next review is scheduled for 2027, and the ESC should therefore develop Terms of Reference for the MP review this year.

92. The Chair advised that the ESC 30 in 2025 agreed that any Management Strategy Evaluation (MSE) testing of new or revised MPs (in light of the revised research budget) could be considered as part of the Terms of Reference (ToR) for the planned MP review in 2027. In addition, ESC 30 recommended that scenario testing for the 2027 MP review include climate change scenarios in the reference set and an investigation of the consequences in terms of revised targets.

93. New Zealand introduced the joint paper CCSBT-ESC/2608/32, submitted by New Zealand, Australia, and Japan, outlining Terms of Reference for the review of the MP. New Zealand invited discussion on how well the CTP is performing and whether a new objective is required, as well as any future development work, noting the paper distinguishes the review of the MP from wider strategic objectives such as resourcing and objectives.

94. One Member, while recognising the importance of the MP, but also noted the budgetary constraints currently being experienced by the Commission. Members were also reminded of paragraph 41 of last year's Extended Commission report, which states that the MP review should look at both input data and costs.

95. Members and the Advisory Panel deliberated on paper CCSBT-ESC/2608/32, specifically on defining the success of the current MP, the nuances of managing for B_{MSY}, and the risks of fluctuating objectives.

96. The ESC has agreed to undertake the MP review through a two-stage procedure. Stage 1 will evaluate the existing, unchanged CTP using the 2026 OM and identify any substantive deviations from expected performance, together with aspects of the management strategy that may warrant reconsideration. If Stage 1 indicates that revision may be needed, Stage 2, subject to Commission direction, would examine the relevant objectives and develop and evaluate potential revisions to the management strategy. This stage will consider costs and feasible alternatives where these are relevant to future operation of the CTP.

97. A small group was convened to discuss the workplan for the OMMP Working Group to complete the MP evaluation during 2027, following the Terms of Reference of the MP review.

98. The MP evaluation will require new software to use projection results generated with the new R-TMB code to calculate performance statistics and produce plots similar to those used in 2019, when the CTP was tested. This task would be most efficiently undertaken by the consultant Dr. Darcy Weber.

99. The analyses that will inform the MP evaluation will be conducted by Member scientists using the new SBT code. Much of this work should be completed prior to an in-person OMMP meeting, where results would be evaluated and further analyses proposed and conducted as appropriate. The final results of the MP review (first Stage, as defined in **Attachment 6**) will be presented at ESC 32.

100. While many of the robustness tests to be conducted for the MP review will be similar to those completed for the 2026 assessment and in 2019 when the CTP was adopted, new tests will need to be designed to assess potential impacts of climate change and MP input data. In particular, new robustness tests will be needed to evaluate the value provided by the gene-tagging program and the impact on CTP performance of possible reductions on its scope. A range of alternative gene-tagging scenarios could be considered between two extremes: the status quo program, which aims to produce annual estimates of age-2 abundance with a 25% CV, and the complete cessation of the gene-tagging program. The small group considered that, in order to evaluate the value of the gene-tagging program as a fishery-independent recruitment index, robustness tests involving combinations of recruitment failures and biased CPUE indices would need to be conducted. If such tests showed increases in risk in the absence of Gene Tagging (GT) or under reduced programs, one possible approach to assess the value of information might involve evaluating the impact on catches of implementing MP that have been retuned to achieve similar risk levels. The specific details would need to be considered after results of the first round of analyses become available.

101. To complete this work, the group recommended that the following activities be conducted during 2027:

- First half-day webinar, towards the end of February, to discuss proposals for a set of robustness trials to be used to evaluate the current CTP and its performance under alternative scenarios for the gene-tagging program.
- Second half-day webinar, to be held approximately one month after the first, to discuss the results and propose further analyses.
- In-person OMMP meeting, held during the last week of June, to evaluate the results and advance the MP review that will be presented at the ESC 32 meeting.

102. The ESC agreed the Terms of Reference for the 2027 MP Review, as shown in **Attachment 6**.

Agenda Item 8. Fisheries and Scientific Indicators of Stock Status

103. Discussions for this agenda item commenced by correspondence in advance of the ESC.

104. Australia submitted paper CCSBT-ESC/2608/19 on a 2025 - 2026 update of fishery indicators for the SBT stock, which includes indicators in two groups: (1) indicators unaffected by the unreported catch identified by the 2006 Japanese Market Review and Australian Farm Review; and (2) indicators that may be affected by the unreported catch. Given the time since these reviews, the recent trends for some of these indicators are unlikely to be affected by unreported catches. Recent trends in indicators are summarised in Appendix 1 of this paper. Two indicators of juvenile (age 1–4) SBT abundance were updated. The piston-line trolling survey decreased from the last index in 2025, as did the grid-type trolling index. However, the gene-tagging abundance estimate was updated to include 2024 and increased from the previous year. Indicators of age 4+ SBT exhibited mixed trends. The standardised CPUE from the New Zealand domestic longline fishery decreased in 2025. In contrast, both the Japanese longline nominal CPUE and standardised CPUE series (GAM series) increased in 2025. The close-kin detection rate for 2021 was very similar to the rate in 2020. Updated Indonesian age data were not available, but Indonesian length data were updated and there was an increase in the mean size.

105. Japan submitted paper CCSBT-ESC/2608/27, which provided a summary of fisheries and scientific survey indicators for southern bluefin tuna stock in 2026. These indicators were examined to provide information for checking for the possibility of unexpected circumstances occurring for the SBT stock. The Japanese longline CPUE indicators for the 4, 5, 6&7, 8-11, and 12+ age groups are well above the historically lowest levels observed in the late 1980s or the mid-2000s. CPUE indices for these age groups have fluctuated in an aperiodic way and/or showed increasing trend over the past 10 years. Especially, CPUE indices for age 4, 5, 6&7, and 12+ show substantial increases in recent years. Age-aggregated (age 4+ group) CPUE indices that include the one used in the OM and MP also show substantial increasing trends over the past 10 years. The current levels of these indices are well above the historically lowest observed in the mid-2000s. Various recruitment indicators inspected suggest that recruitment levels in recent years have been similar to or higher than those observed in the 1990s (before the markedly low recruitments of 1999 to 2002 cohorts occurred)

but the levels of recruitment have varied from year to year. It should be noted that among the two indices derived from the trolling survey for age-1 fish, the TRG recruitment index shows a low level from the 2016 to 2025 cohorts although the index has maintained a similar level, as well as that the TRP recruitment index recorded zero values in 2018 and 2019, suggesting some concern regarding potential low recruitment in recent years.

106. The overall result from both papers is that the indicators are positive. Most of the CPUE indicators have increased in recent years except for Japanese age 3, Taiwanese age 4 and New Zealand domestic standardised CPUE. A summary of recent trends in all indicators of the SBT stock is provided in **Attachment 7**.

107. Related to information on recruitment monitoring, it was noted that dominant catches of the Australian purse seine fishery (now about 70% of Australia's total catch) have shifted from age 3 to age 2.

Agenda Item 9. SBT Stock Assessment

108. The MP metarules (Attachment 8 of ESC 25 report, 2020) specify the timing for completion of a full assessment of stock status every three years.

109. Australia, Japan and the CCSBT consultant collaborated on paper CCSBT-ESC/2608/20 on the southern bluefin tuna stock assessment. The 2026 assessment provides estimates of current stock status (in 2026). The assessment software has changed to the new RTMB code that allows for MCMC sampling and estimation of parameter uncertainty within each grid cell. The 2026 assessment models have a similar structure and population dynamics behaviour to the previous models (which were coded in ADMB). The 2026 assessment indicated further rebuilding of the stock since the last assessment in 2023. The fits to the data did not indicate any areas of concern. The sensitivity tests were defined to assess impacts on stock status estimates from additional areas of uncertainty. The current assessment indicates that the stock is close to the current rebuilding target (30 % TRO[10], by 2035), and to TRO at MSY. Current relative (to pre-exploitation) TRO is estimated to be 0.28 (95% credible interval 0.21-0.37). The projections for the reference set of models indicate that the MP rebuilding target will be reached earlier than planned, i.e. by 2028.

110. Japan presented paper CCSBT-ESC/2608/38, which detailed the calculation of the coefficient of variation of GAM22 CPUE index for the SBT assessment in 2026. This paper described the calculation of the year-specific CV for GAM22, which was used in the stock assessment in 2026. As the CV values derived from the simulation were very low in some of the earlier years, their log-scale variances were added to a baseline variance corresponding to a log-SD of 0.20. Although the CV value was high for 2025, retrospective analyses showed a similar pattern in the final two to three years of each series.

111. The ESC noted the substantial testing of the new software code for use for the stock assessment in 2026 and thanked the CCSBT consultant Dr Darcy Webber for his work on the project to produce the new code.

10 Total Reproductive Output

112. The ESC noted the changes to the assessment structure, using the new RTMB software. The grid of models contains three steepness values and three values of the close kin mark-recapture (CKMR) power parameter for relative reproductive contribution by age, psi (ψ), giving nine cells rather than the previous 108-cell grid (**Table 1**). The assessment code has changed to enable Markov Chain Monte Carlo (MCMC) sampling that accounts for parameter uncertainty within each grid cell and uncertainty across grid cells. The full reference set results are the combined posterior from 2000 samples from the grid with equal (balanced) sampling. Data inputs are mostly the same as previous inputs, and the population dynamics and general model structure remain similar to the previous assessment. The main changes are:

- **Selectivity:** a two-dimensional AR(1) process that smooths correlated effects over age and year, where temporal variation is permitted between pre-specified selectivity blocks (Anon, 2025b).
- **Natural mortality (*M*):** a length-based curve from age 0 through age 25, namely $M_a = M_{10}$, using mean length-at-age $L_a$from the first year and season of the model, followed by a linear increase from M_{25} to M_{30}. Parameters M_{10} and M_{30} are estimated. The exponent m_c is fixed at -1, which makes mortality inversely proportional to length for ages up to 25 (as described by Lorenzen 1996).
- **CKMR POP likelihood:** when an adult is not directly aged, its capture length is used and the likelihood integrates over its possible ages (Anon, 2024).
- **Length and age compositions:** a wider set of likelihood options, including compound Dirichlet-multinomial and Dirichlet formulations (Anon, 2024).
- **CPUE selectivity:** CPUE-weighted Japanese longline length frequencies estimate the selectivity associated with the Japanese GAM22 CPUE index (Anon, 2025b).
- **CV of CPUE data series:** the year-specific CVs from GAM22 are added to the historical constant CV of 20% (on the log-scale), giving CVs on the linear scale ranging from 20.24% to 30.10%, with mean 21.34% (Itoh et al., 2026).

Table 1: The reference set grid of 9 models. The full reference set results are from the combined posterior from 2000 samples drawn evenly from across the nine grid cells.

Parameter	Values	Grid prior	Sampling protocol
Steepness (h)	0.6, 0.7, 0.8	Uniform	Balanced across cells
Psi (ψ)	1.5, 1.75, 2	Uniform	Balanced across cells

113. The ESC noted from the MCMC results that the data did not support lower values of steepness (0.55) used in the 2023 assessment, and the steepness range was consequently adjusted.

114. The ESC noted that fits to the data were good and endorsed using the new protocol for weighting data in the models. The ESC endorsed using the new code for the MCMC approach and the new grid.

115. The ESC agreed with the advice on stock status for 2026 that for the reference set the estimate of relative TRO (TRO_{2026}/TRO_0) is 0.28 (0.21-0.37) (**Table 2**

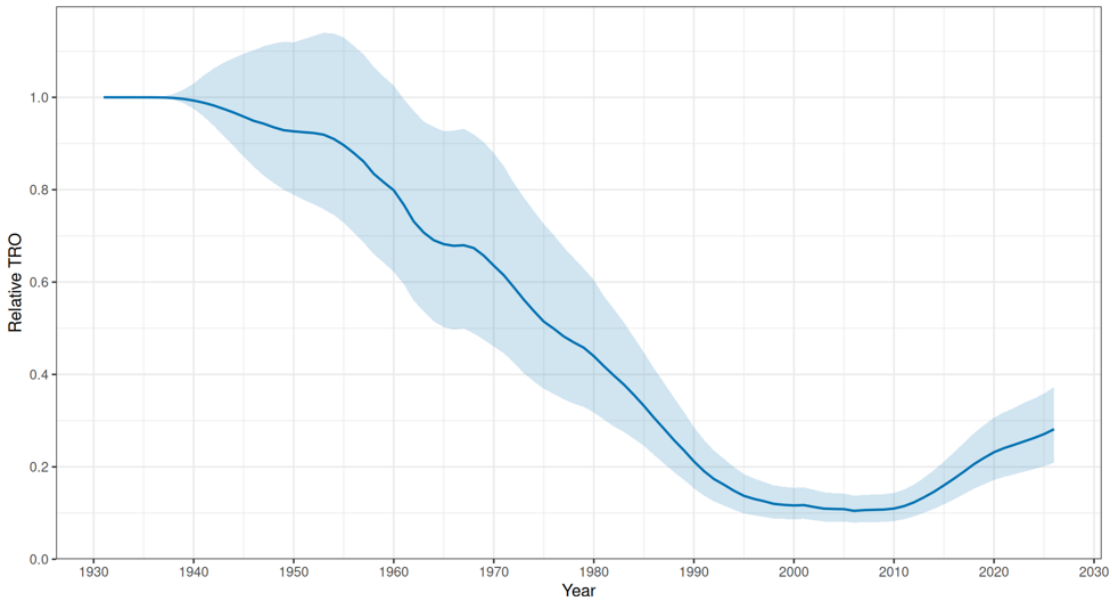
below). The estimate of relative biomass of animals aged 10+ is 0.23 (0.17-0.31). These stock status estimates have improved since the 2023 assessment (**Figure 1**).

116. Current TRO is estimated to be at 0.99 of TRO_{MSY}, with the range including values greater than 1.0 (0.63-1.59). MSY shifts with each assessment but changes in the estimates are small (Table 2 below). Current fishing mortality (F) is well below F_{MSY}: the F to F_{MSY} ratio is 0.55 (0.38-0.81).

Table 2: Summary of stock status for the reference set of OMs. Presented as the posterior medians. The assessment results from 2023 are included for comparison as are the estimates for 2023 from the current assessment.

Year (y)	**Relative TRO (TRO_y/TRO_0)**	**P(Relative TRO < 0.2)**	**Relative B10+**	**F/F_{MSY}**	**$TROy/TRO_{MSY}$**	**MSY (t)**
2023 from previous ADMB assessment in 2023[1]	0.23 (0.21-0.29)	-	0.22 (0.19-0.26)	0.46 (0.34-0.65)	0.85 (0.61-1.29)	30,648 (29,152-31,376)
2023 from new 2026 assessment[2]	0.255 (0.189-0.338)	0.068	0.231 (0.171-0.310)	0.567 (0.397-0.805)	0.929 (0.590-1.495)	32,984 (26,813-40,131)
2026 from new assessment[2]	0.281 (0.209-0.373)	0.011	0.231 (0.171-0.313)	0.553 (0.383-0.811)	0.985 (0.629-1.587)	32,529 (26,400-39,381)

1. Figures in brackets are 80 % confidence intervals
2. Figures in brackets are 95 % credible intervals



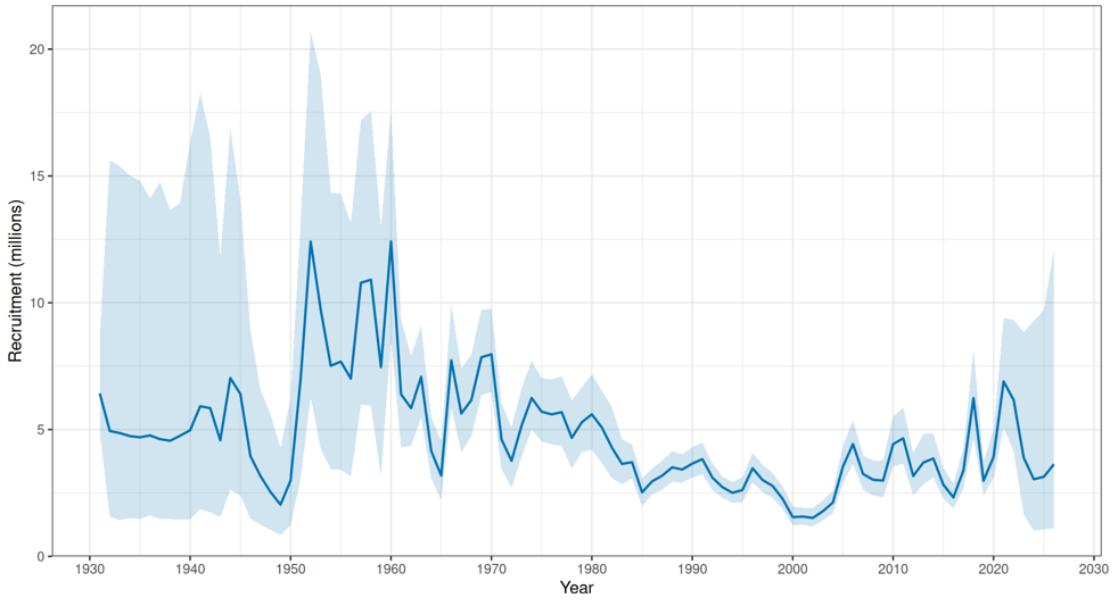


Figure 1: Relative TRO (top) and recruitment trajectory (bottom) for the reference set of models. The line shows the posterior median and the shaded ribbon shows the 95% credible interval. Note that 2022 is the last year for which there is directly observed information on recruitment (final Gene Tagging observation). The recruitment estimates after this period are being shrunk towards the stock-recruitment curve-defined mean recruitment and do not reflect a data-driven decline in recruitment.

117. Sensitivity tests were conducted to examine impacts on results of alternative assumptions. The estimates of current stock status (relative TRO) were reasonably consistent across the sensitivity tests. Most sensitivity test results are the same as, or slightly more optimistic than, those for the base model. The largest differences were for the sensitivity test where CPUE catchability is split in 2008 (Upq2008) with lower relative TRO of 0.239, and the test which restores the previous direct four-anchor natural-mortality parameterisation (old_m) results in more positive TRO of 0.339 (compared to 0.282 for the base model).

118. A sensitivity test examining the effect on results of taking into account within-cell uncertainty demonstrated the broader range of uncertainty in the results, with median estimates of relative TRO from both methods being the same, e.g. relative TRO range is 0.209–0.373 (95 % interval), whereas the deterministic MLE grid range is 0.228–0.329 (**Figure 2**).

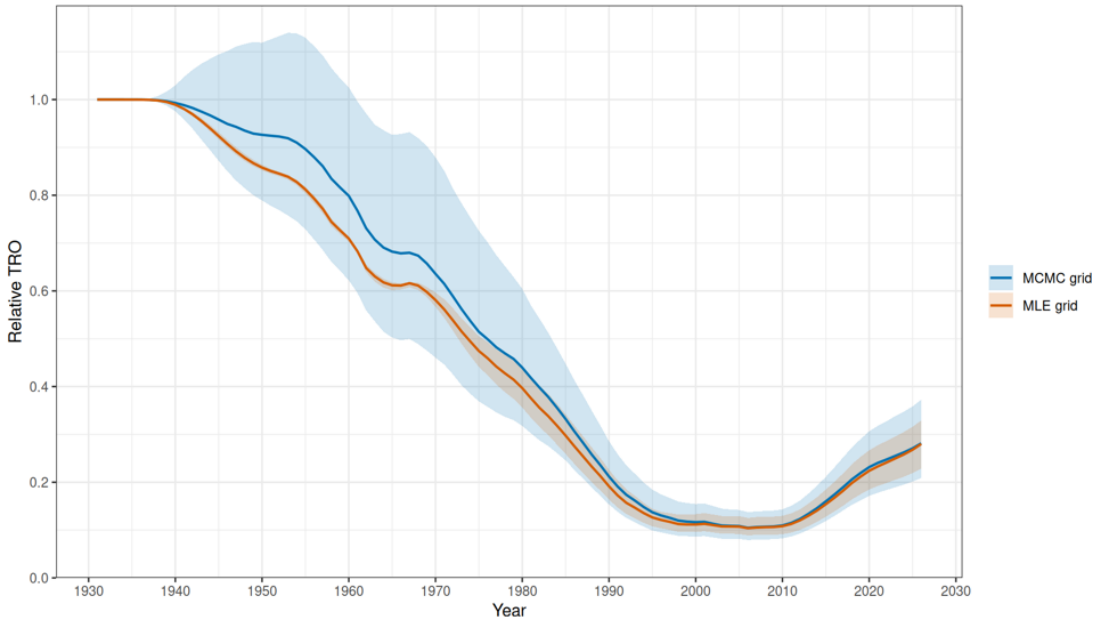


Figure 2. Relative total reproductive output comparison between the MCMC reference set of models and the sampled MLE grid. Lines show medians and shaded areas show 95% intervals.

119. The projection results for the reference set show that there is a 71 % probability of being greater than 0.30 TRO_0 in 2035, which is above the target of 50 %. The probability of being above the original interim target of 0.2 TRO_0 by 2035 is 99 % (the original interim target was 70 %). The estimated depletion in 2035 is 0.339 (0.218-0.542). All of these statistics are an improvement from the 2023 assessment projection results. The mean TAC from 2026 through to 2035 is 25,399 t (25,349-26,249), indicating that current global TAC is approaching the upper limit of 32,000 t as specified in the MP.

120. One major change in the new projections code is the modelling of future recruitment uncertainty. Previously the model used empirical estimates of variance and lag-1 autocorrelation. Now it uses an ARIMA (Auto-Regressive Integrated Moving Average) model where the full time-series characteristics of each recruitment history (i.e. per MCMC sample) are estimated and then used in generating future recruitment uncertainty. The ARIMA model is also used to define the recruitment deviations that link the last data-informed estimates (2022) and the projection years. This means that the post-2022 recruitment estimates, which are just being shrunk back to the stock-recruit curve (see **Figure 1**– TRO and recruitment trajectory), are not being used here.

121. In summary, the ESC noted the continuous strong rebuilding of the stock and improved stock status since the 2023 assessment. The relative TRO is estimated to be at 0.28. TRO is at 99 % of the TRO at MSY. Projected rebuilding of the stock is on track and close to the rebuilding target, with the median of models runs projected to be at the target in 2028. The sensitivity tests did not indicate any issues, with most sensitivity tests giving similar, or better, stock status results than the reference set. The ESC noted the successful implementation of the new software, MCMC and small grid approach and more consistent protocol for weighting data in the models and endorsed this approach for use in future.

Agenda Item 10. Operation of the Management Procedure and SBT Management Advice

10.1. Evaluation of meta-rules and exceptional circumstances

122. Australia presented paper CCSBT-ESC/2608/21 on the annual review of exceptional circumstances for SBT 2026. The meta-rules adopted with the CCSBT Management Procedure (MP) provide a process to determine whether exceptional circumstances exist and a process and guidelines for action to address issues when identified. The aim is to identify exceptional circumstances where stock or fishery indicators, the MP input data, population dynamics, fishery or fishing operations are substantially different from the conditions under which the MP was tested, or if catches are greater than the recommended TAC. If there is evidence for exceptional circumstances, then the next step in the process is to determine the potential severity of the "exception" and follow the guidelines for action. This year we are using the meta-rules process to review the recommended TAC for 2027-2029 from running the MP in 2025. The CPUE index value for 2025 is outside the 95 % bound of projected CPUE values from OMs used in the MSE in 2019 and this is an exceptional circumstance. The trend in CPUE is positive and therefore risks to the stock are currently low. However, the high CPUE in recent years has had an impact on the MP TAC recommendation made in 2025, as the CPUE series is primarily driving the increase in TAC.

123. Japan presented paper CCSBT-ESC/2608/28 on a check of OM predictions from the viewpoint of implementation of the MP in 2026. Japan examined observations/information of input index/data (Japanese longline GAM22 CPUE, age 2 abundance estimate from GT, and CKMR data) for the CTP comparing to the 2019 OM predictions. These examinations indicate that the most recent observation (2025) of GAM22 is outside the upper boundary of the Base case OM predictions in 2019 and that this is therefore an exceptional circumstance, while all the current observations of other inputs are consistent with the predicted ranges from the 2019 OM, reflecting no exceptional circumstance for the other inputs. Uncertainty of GAM22 is noted to get larger in recent years. However, the 2026 stock assessment which incorporated such uncertainty indicates further rebuilding of SBT stock compared to the 2023 assessment. Thus, the severity of the exceptional circumstance for GAM22 is considered low. Regarding a decision on implementation of the recommended TAC for the 2027 season (23,647 t, calculated by the CTP in 2025 to be applied to the 2027-2029 period), the paper concludes that no modification of the value of this TAC is required because: 1) there is no conclusive evidence to support a declaration of exceptional circumstances with high severity from the viewpoints of a check of the OM predictions and other potential factors (the extent by which the total reported global catch exceeds the TAC, UAM, results of stock assessment conducted in 2026, issues related to biological sampling in Indonesia and changes in the operating pattern of Indonesian fishery, continuity of the GT noting the associated budgetary issue); and 2) no unexpected change has been detected in the fisheries and scientific survey indicators examined. There are points to note concerning UAM, the current assumption/treatment of Indonesian fishery in the OM with respect to changes in the operating pattern of this fishery, and the GT continuity/budgetary issue. Japan considers that these points should be reconsidered in the 2027 MP review for the CTP.

124. The ESC discussed not just the 2025 CPUE point but also the recent increasing trend in the series relative to the projections. It was noted that both residual autocorrelation in the CPUE residuals as well as a very different realised recruitment pattern (in the current OM compared to the 2019 OM) relative to the projections contribute to this observation.

125. Given the amount of change over time in both the CPUE modelling and the OM, the ESC was asked whether this needs to be taken into account when interpreting an exceptional circumstance such as this year's case. The ESC discussed whether just one exceptional circumstance was enough to precipitate action, or whether a certain number needed to be triggered. It was noted that there has been no hesitation previously in declaring that an exceptional circumstance exists, and that this group has demonstrated a pragmatic approach to dealing with this relative to actions arising and potential changes (or not) to management advice on the basis of a declared exceptional circumstance.

126. The ESC concluded that the high CPUE estimate for 2025 constitutes exceptional circumstances, but because of the positive CPUE trend agreed that the risks to the stock are low. The ESC consequently agreed not to amend its advice on the 2027-2029 TAC block.

10.2. Consideration of the potential impacts on the ESC's scientific advice arising from possible changes in Members' allocations

127. The Chair advised that the EC is currently discussing Member allocations. The ESC was asked to provide advice on whether changes to allocations would affect rebuilding of the SBT population.

128. At the OMMP 16, a sensitivity test was specified to examine the impact of a single alternative allocation on future rebuilding performance.

129. Results presented in paper CCSBT-ESC/2608/20 indicated that there was a negligible impact on rebuilding compared with the projection results using nominal allocations.

130. The ESC clarified that the alternative scenario involved making the recommended TAC increase available to fishery 5 (Indonesian fishery) in projections as an upper bound on options, and applying this from 2027.

10.3. Confirmation of Management Procedure recommended TAC for 2027-2029

131. The full specification of the CTP, adopted in 2019, includes the data inputs and the associated meta-rules (Attachment 8 of the report of ESC 25 (2020). The CTP has been used to provide advice on the recommended TAC for the blocks of years 2021-2023, 2024-26 and 2027-2029. In 2025, the MP was run and the recommended global TAC for 2027-2029 was 23,647 t/year, which is a 3,000 t (maximum) increase from the previous TAC (from 20,647 t to 23,647 t).

132. As discussed under Agenda item 10.1, exceptional circumstances were detected in the 2026 review of evidence but the ESC noted risks to the stock were low. The ESC consequently recommended no changes to the recommended TAC for 2027-2029.

133. The ESC confirmed that the recommended TAC is 23,647 t/year for the 2027-2029 fishing years.

10.4. Summary of SBT management advice

Recommended global TAC for 2027-2029

134. The application of the CTP in 2025 resulted in a recommended global TAC for 2027-2029 of 23,647 t/year. The 2026 ESC reviewed evidence of exceptional circumstances and confirmed its recommendation to set the TAC at 23,647 t/year for the 2027-2029 fishing years remains unchanged.

135. The ESC therefore again recommends to the EC that the 2027-2029 global TAC be set at 23,647 t/year.

Indicative 2030-2032 TAC

136. In 2021, the Commission requested estimates of the potential TAC for the next TAC block. These were documented in ESC 27 and are updated in ESC 28.

137. Projections from the 2026 stock assessment shows that there is a high probability that the TAC will increase for the next quota block (2030-2032).

138. The ESC noted that these are simulated estimates and the CTP will be run formally in 2028 (by which time further data will be available for input – CPUE, close-kin and Gene Tagging) to provide the recommended TAC for the years 2030-2032.

SBT Stock Status Summary

139. The ESC this year conducted the stock assessment, which was the second full assessment since the CCSBT adopted the CTP. Key outputs from the 2026 stock assessment are in **Table 3** below.

140. The ESC notes from the 2026 assessment that:

- The stock, as indicated by relative Total Reproductive Output (TRO), is estimated to be 28 % (21 % - 37 %; 95 % credible interval) of TRO_0;
- Stock status has continued to improve and is well above the low point reached in the 2000's (**Figure 2**);
- The stock is at approximately 99 % (63 % - 159 %; 95 % credible interval) of the level estimated to produce maximum sustainable yield (MSY); and
- The fishing mortality rate is at approximately 55 % (38 % - 81 %; 95 % credible interval) of the level associated with MSY.

Table 3: Southern Bluefin Tuna summary of 2026 assessment of stock status.

Southern Bluefin Tuna Summary of 2026 Assessment of Stock Status[11]	
Reported 2025 catch	18,891 t
2026 status relative to initial	
TRO	0.28 (0.21-0.37)
B10+	0.23 (0.17-0.31)
TRO (2026) relative to TRO_{MSY}	0.99 (0.63-1.59)
F/F_{MSY}	0.55 (0.38-0.81)
Maximum sustainable yield	32,529 (26,400-39,381) t
Current management measures	Effective catch limit for Members and Cooperating Non-Members: 20,647 t /yr for the years 2024-2026.

TRO is the total reproductive output summed over all age classes weighted by their relative individual contribution to reproduction.
Note: B10+ is the biomass of fish aged 10 years and over.

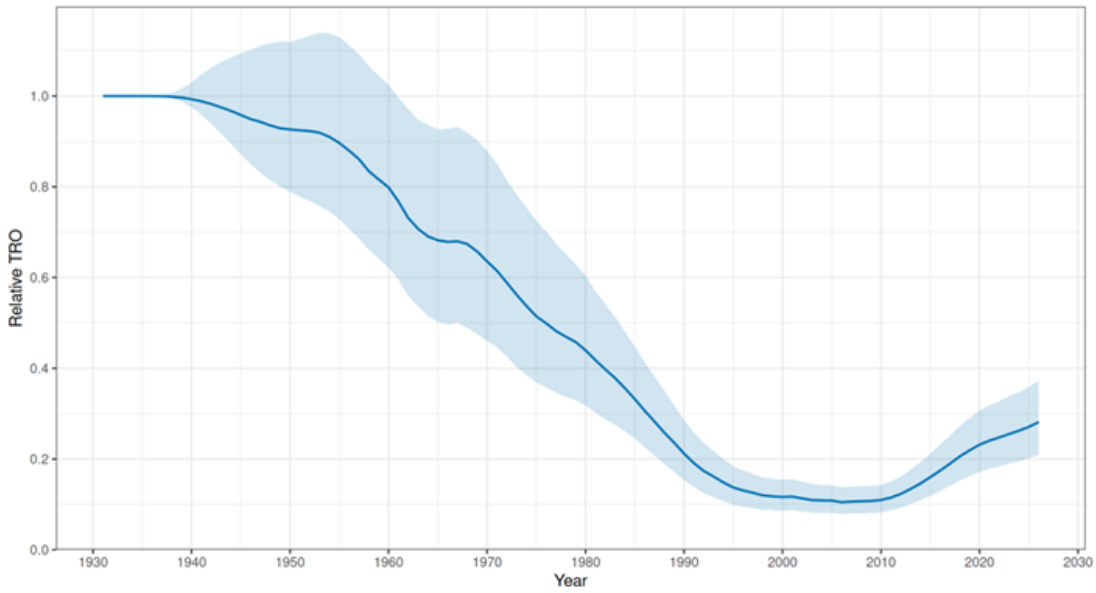


Figure 2: Relative TRO trajectory for the reference set of models. The line shows the posterior median, and the shaded ribbon shows the 95 % credible interval.

141. The ESC updated the annual report on biology, stock status and management of SBT that it prepares for provision to FAO and the other tuna RFMOs. The updated report is in **Attachment 8.**

Agenda Item 11. Potential impacts of climate change

142. Australia provided paper CCSBT-ESC/2608/BGD06 on ensuring the SBT MP advice is robust to impacts of climate change. The paper suggests that CCSBT

[11] Values in parentheses show the 95 % credible interval.

focus on whether the science advice for management of the stock and fisheries is robust to changes that may occur. Extensive research has already been undertaken world-wide on impacts of climate change on fish stocks, but predictions are usually highly uncertain, because of the complexity of changes in physical and biological systems, and the underlying processes and interactions. A very wide range of processes may be affected by climate change, but these can be categorised into a small set of concerning outcomes that could affect operational advice, e.g. reduced recruitment, reduced adult/spawner abundance, changes in key population dynamics parameters (e.g. mortality, growth) and changes in spatial distribution. The CCSBT is well positioned to respond to the direct impacts of climate change on the stock and fishery because it has in place the meta-rules framework and exceptional circumstances process to address changes, an adaptive management procedure that has been tested via MSE, and fishery-independent monitoring programs. The paper proposes that the ESC focus on robustness of the advice from the MP, adequacy of the monitoring programs, and identifying any gaps in monitoring and future research needs.

143. The ESC supported this approach and agreed with the following key points summarised from the 2025 ESC report:

- Recruitment
  - TAC advice is robust and responsive to changes in recruitment.
  - Monitoring recruitment is essential as an early warning indicator of climate-related impacts and future stock size
  - Impacts of climate change on SBT may first become evident through changes in the annual recruitment index
- Adult abundance
  - TAC advice and MSE are generally robust to changes in adult abundance as monitored through the CKMR program;
- Population parameters
  - The MSE included a range of plausible scenarios for some population parameters, but the MP is not directly responsive to changes in population dynamics, and not all population parameters are routinely monitored;
- CPUE
  - The MP is responsive to changes in CPUE but changes in spatio-temporal patterns in distribution may have an impact on CPUE trends.
  - The greatest risk is the MP's reliance on fisheries-dependent CPUE data, which may be affected by changes in SBT distribution rather than changes in abundance alone.
  - Data sets like fisheries-dependent CPUE that have non-linear relationships with abundance (hyperstability specifically), or experience profound catchability shifts, may fail to capture changes in recruitment dynamics.
- Research needs:
  - Investigate linkages between climate, stock distribution, and CPUE to understand the relationships of these processes, and consequences to the MP and resulting TAC advice.
  - Monitor key population dynamics parameters shown to respond to ecosystem shifts, including growth, weight-at-length, and weight-at-age.

Noting that the ability to observe/estimate the rate and direction of change in those other quantities will be important in the context of what to explore in future MSE work.

- Assess how climate-driven shifts in stock productivity could affect fishery targets

- Other monitoring
  - Providing and evaluating monitoring data that may be affected by climate impacts is a good approach for considering operational advice via the MP.

144. The ESC also noted the potential value of other indicators of environmental change, including fish condition, methods for identifying bias or anomalies in CPUE, changes in growth rates.

Agenda Item 12. Update of the Scientific Research Program (SRP)

145. The Chair advised that this is a standing agenda item to allow Members to consider new proposals and/or changes to existing SRP projects (including timing of deliverables).

12.1. Long-term planning for gene tagging program

Gene Tagging Program

146. CSIRO presented paper CCSBT-ESC/2608/13 on Gene-tagging proposal for 2027-28. The CCSBT gene-tagging program provides an annual estimate of absolute abundance of juvenile SBT for use in the CTP, stock assessment, OM and review of indicators. When the aerial survey of relative abundance of 2-4 year-olds ceased, the 2015 ESC reviewed the need and options for recruitment indices and advised that recruitment monitoring was essential and that gene-tagging was the best monitoring method. The gene-tagging program was specifically designed to provide fishery-independent information on recruitment for the new MP and MSE work conducted 2016-2019. The ESC has noted that recruitment information is essential for managing a long-lived and late-maturing species, because it provides an early warning of future spawning stock declines, which is especially important given uncertainties related to impacts of climate change. The gene-tagging program has been running successfully since the pilot project in 2016 until the present. This paper outlines the proposed research plan and budget for the gene-tagging program for the next 3 years.

147. A Member noted that the gene-tagging program was very important and provided a direct data input to the MP, as well as that budgets were constrained and that an increase in the indicative budgets for 2028 and 2029 might not be supported, particularly if the rebuilding stock resulted in a lower required precision (CV) for future abundance estimates.

148. The ESC discussed the proposed gene-tagging budget and the relationship between the annual tagging and harvest-sampling activities and the resulting juvenile abundance estimates. It was noted that the 2027 budget was a high priority, as it included harvest sampling required to obtain the abundance estimate for the 2026 age-2 cohort, for which tagging (tissue sampling) had

already been completed in 2026. Failure to undertake this harvest sampling would result in an exceptional circumstance, as the existing design is incorporated into the MP and could not be changed retrospectively.

149. The ESC noted that the review of the MP is scheduled for 2027 and along with other analyses may result in recommendations to change the gene-tagging program. This could include changing the level of precision required for future abundance estimates, which in turn could result in changes to the required tagging and harvest sample sizes and associated costs. The ESC noted that the outcomes of the MP review would be available to inform subsequent gene-tagging budgets, including the 2028 and 2029 budgets.

150. It was noted that the Finance and Administration Committee requires a proposed budget for 2027 and indicative budgets for the subsequent two years. Given the potential implications of the 2027 MP review, the ESC considered that any potential changes to the gene-tagging design, sampling requirements and associated budget for subsequent years should be considered following the MP review.

CKMR Program

151. CSIRO presented paper CCSBT-ESC/2608/14 on Workplan and budget for close-kin mark recapture and Indonesian length/age monitoring. The CKMR and Indonesian length/age monitoring program provides essential data for SBT stock assessments and the CTP used to set global TACs. Supported by CCSBT since 2014/15, the program collects tissue samples from adult SBT in Indonesia and juveniles in Australia for CKMR analyses, and otoliths from the Indonesian fishery for age determination. Following reduced sampling from 2020/21 in Indonesia, monitoring capacity was successfully rebuilt, with more than 5,000 tissue and 3,000 otolith samples collected in Indonesia in 2025/26, largely addressing previous data gaps. CSIRO and BRIN are progressing a Material Transfer Agreement to enable the samples to be transported to Hobart for analysis. This proposal outlines the 2027-2029 work plans and budget requirements for the CKMR and Indonesian length/age monitoring programs. The CKMR component includes tissue sampling, DNA genotyping, and kinship analyses, while the length/age component includes otolith collection and ageing to provide age composition data. The 2027-2029 budget represent the CCSBT-funded component, with additional co-investment from CSIRO. Funding has previously been provided annually but could be consolidated into a three-year project. Continued support will ensure the provision of essential monitoring data required for effective assessment and management of the SBT stock.

152. In response to a question about whether the proposed project budget could be spread more evenly across the three years, CSIRO advised that this could be accommodated by reducing the number of samples genotyped in 2027 and spreading the genotyping workload across subsequent years. It was noted that this would not be expected to affect the longer-term CKMR analyses, as the samples are analysed over multiple years and the adult samples represent a range of ages. However, completing more of the genotyping in 2027 would allow updated POPs and HSPs to be identified in time to incorporate into the 2028 MP application, helping to address the gap in recent CKMR data.

12.2. Multi-National Fishery Longline CPUE Data Standardisation Project

153. The Chair recalled that ESC 30 in 2025 ranked the SRP proposal, Developing a multi-national fisheries longline CPUE data standardisation project to potentially mitigate effort concentration, as the second-highest priority, and requested AUD 42,000 to implement the project in 2026 under the ESC's three-year workplan. However, the EC subsequently decided to delay development of the new CPUE series to 2027 due to the Commission's budgetary constraints. To assist the Finance and Administration Committee (FAC) and the EC in their discussions, the ESC is requested to discuss, in light of the timing of the full stock assessment and the MP run, whether this project needs to be implemented in 2027 or if it could be deferred to a later year.

154. The chair of the CPUE modelling group gave a brief summary of the state of the historical work on this topic. The ESC noted that while there was a paper comparing national CPUE indices submitted to ESC 29, there has been no further direct work on the integration of multiple countries data into a single abundance index. The group agreed to write a short document for potential inclusion in the SRP or to justify a future webinar on this topic.

155. The upcoming CPUE standardisation workshop in Yokohama, October 2026 was raised and explained to the ESC, given it has clear relevance to this work item. The group was asked whether potential future work could be dealt with within the OMMP meeting instead of an additional budget item, given the current challenges therein. The group was advised that the proposal would have a suitably broad array of options for both funding of the work, and where within the various CCSBT working groups it might be best located.

156. The ESC discussed the development of detailed spatiotemporal simulation models to explore the bias and precision properties of the proposed multi-national CPUE standardisation models. The ESC noted that down-sized spatiotemporal simulation models had far wider benefits than just CPUE simulation. Specifically, the development of next-generation OMs would allow the group to explore not just CPUE issues, but the integration of the global spatial tagging data sets, climate-change impacts, the implications of the goals expressed in the BBNJ process, and future data collection programs.

157. The ESC discussed the degree to which the proposed project would widen the spatial extent of the catch and effort data and specifically how it might fill the known gaps in the current Japanese fishing footprint, relative to the historic pattern. Japan and Korea fish similar areas, there are well-established differences between the Taiwan long-line fishery and those in long-line fleet one (LL_1) in the OM. and there is a limited spatial spread in the New Zealand and Australian long-line fishery footprint. The ESC noted that existing work has demonstrated there would be some improvement in overall coverage, but the issue with the long-term effort contraction could not be fully solved using the current data even across all long-line fisheries.

158. The ESC discussed the issue of projecting future CPUE in the projections. Currently a lag-1 auto-regressive (AR1) process is used to generate future residuals, which is important especially in the near term given the current trend in CPUE and the associated residuals in the assessment. The most recent 5 years exhibit positive residuals, given the wider most recent CV. This has an impact in

projections through the auto-correlation parameter used to project future residuals. However, the additional trend is not being directly addressed and the ESC discussed whether an ARIMA process, such as that used to simulate future recruitment residuals, could better capture the reality of the most recent residual time-series properties and suggested that this be used as a robustness test.

Agenda Item 13. Report from the Sixteenth Meeting of the Ecologically Related Species Working Group

159. The Sixteenth Meeting of the Ecologically Related Species Working Group (ERSWG 16) was held from 3-6 March 2026 in Canberra, Australia. Although the ESC cannot change the ERSWG 16 report, following the Terms of Reference of the ERSWG, the ESC may provide comments to the EC on the ERSWG report (including advice and recommendations). The full report of ERSWG was provided to the ESC as CCSBT-ESC/2608/Rep02.

160. The Secretariat submitted paper CCSBT-ESC/2610/07, which provided the summary of the report of ERSWG 16. While the ERSWG 16 did not make specific recommendations or requests to the ESC, the Secretariat paper highlighted outcomes from the ERSWG 16 that could be relevant to the ESC's discussion, such as:

- ERSWG's report to the EC on Progress against the CCSBT Strategic Plan;
- Electronic monitoring (EM) related matters, particularly related to the relationship between the 10 % observer coverage target under the Scientific Observer Program Standards (SOPS) and EM review rates; and
- Seabird priority species and high-risk areas on seabird bycatch within CCSBT fisheries based on the outcomes from the CCSBT's Spatially Explicit Fisheries Risk Assessment (SEFRA), and additional measures to address high-risk areas of seabird bycatch using the recommended toolbox.

161. The ESC noted the report of ERSWG 16.

Agenda Item 14. Electronic Monitoring Systems (EMS)

162. The Chair advised that Members agreed to include an agenda item to address issues relating to Electronic Monitoring System (EM/S) in future meetings of the ESC. It was recalled that, at ESC 30, New Zealand advised that intersessional work in coordination with Australia had occurred to demonstrate how information is collected by Electronic Monitoring (EM) to meet the requirements of the SOPS but that as part of this exercise it was determined that additional work would need to be undertaken and a paper be submitted at ESC 31.

163. New Zealand presented its joint paper CCSBT-ESC/2608/33 (Rev.1) on Electronic Monitoring and Scientific Observer Program Standards. EM systems, when used alongside electronic logbooks and vessel position reporting, are capable of collecting all essential CCSBT Scientific Observer Program Standards (SOPS) data elements and, in some cases, improve data quality through better logbook reporting, flexible review rates, data auditing, retained video records,

and increased vessel accountability. However, EM has limitations, particularly for identifying species to the lowest taxonomic level, independently collecting detailed fishing gear information, and obtaining biological data or samples such as sex, otoliths, and gonads. New Zealand's intersessional work with Australia therefore supports EM as an effective tool for fisheries-independent monitoring and validation of reporting, while recognising that supplementary data collection methods may still be required to replace some observer functions fully.

164. In response to questions on the limitations of EM, such as species-level identification and challenges that persist in biological sampling:

- New Zealand stated that it has ongoing projects to resolve the issues and work through them. It continues to meet its data submission obligations by providing the most reliable logbook data available and supplements biological sampling with shore-based sampling to help comply with obligations; and
- Australia noted that it has been working to improve and validate data quality through congruence analyses between EM data and logbook data, and that it is undertaking a range of initiatives, including the use of machine learning and species identification guides. Australia emphasised that, while EM has some negative aspects, it also offers advantages that make it more useful for monitoring.

165. One Member, noting the limitations of EM in the context of SOPS and CCSBT's data exchange requirements, highlighted the importance of maintaining scientific validity and equivalence of the data when implementing alternative measures, and hoped that CCSBT Members will consider this carefully going forward.

Agenda Item 15. Requirements for Data Exchange in 2027

166. Discussion for this agenda item commenced by correspondence in advance of the ESC.

167. The Secretariat submitted paper CCSBT-ESC/2608/08, which proposed the data exchange requirement for 2027. These requirements are based on the 2026 data exchange requirements with all items rolled over and the dates incremented. The paper also provides a summary of issues with the 2026 Data Exchange, which were:

- Korea did not provide Raised Length Data but submitted raw size data. Korea indicated that it will provide Raised Length Data in the near future, with the cooperation of the Secretariat and other Members who can assist with the data format and methods used to generate the data.
- The most recent Direct Age data Japan submitted was for 2018, which means that Japan has not met the reporting requirements for these data that require data to have been submitted for at least the 2023 calendar year.
- South Africa submitted no Direct Age data but advised that it is collecting otoliths and is in the process of embedding, slicing and mounting them for ageing.
- Australia advised that it had no Indonesian Direct Ageing data to submit this year but anticipates providing new age data in 2027.

- Indonesian longline age composition data have not been provided for the past three Data Exchanges, due to an interruption to sampling in Indonesia in recent years.
- New Zealand has not submitted raw observer length frequency data for 2025 due to it having replaced human observers with electronic monitoring for its longline fleet.

168. The data exchange requirements for 2027 were endorsed by the ESC and are provided in **Attachment 9**.

Agenda Item 16. Research Mortality Allowance

169. Discussion for this agenda item commenced by correspondence in advance of the ESC.

170. The Chair advised that, following the recommendation by the ESC in 2025, the EC agreed to continue the current arrangements on Research Mortality Allowance (RMA) for the 2027-2029 quota block, specifically to allocate 6 t from the global TAC each year. Consequently, the total amount of RMA requested for science projects in 2027 needs to be kept within 6 t.

171. CSIRO summarised the RMA-related part of paper CCSBT-ESC/2608/10, which reported on the Gene Tagging programme 2025-2026 RMA usage and the requested RMA for 2027. Assuming the gene-tagging program in 2027 proceeds, 1 t of RMA in 2027 for the gene-tagging project was requested. In this project, 0.345 t of the 2025 RMA and 0.198 t in 2026 were used, respectively.

172. Australia submitted the related part of paper CCSBT-ESC/2608/17 on RMA request for the research project of satellite tag deployments on juvenile SBT in the Great Australian Bight in 2027. Australia requested 1t of RMA for this project to cover any incidental tagging mortality in the upcoming summer of 2026/27.

173. Japan submitted paper CCSBT-ESC/2608/29 on Report of the 2025/2026 RMA utilisation and application for the 2026/2027 RMA from Japan. Japan reported that it utilised 0.1474 t of the 1.0 t of RMA for 2025/2026 approved research projects. Japan requested 1.0 t of RMA for 2026/2027 for two research projects, including the age-1 SBT trolling survey in southwest Australia and the age-0 SBT distribution survey in western Australia.

174. The ESC supported the 3 t of RMA requested for the projects specified.

Agenda Item 17. Workplan, Timetable and Research Budget for 2027-2029

17.1. Overview, time schedule and budgetary implications of proposed 2027 research activities and implications of Scientific Research Program for the workplan and budget

175. The ESC's recommended three-year workplan and resource requirements for 2027 to 2029 are provided in Attachment Workplan. This workplan is limited to projects that require CCSBT funding and includes regular scientific meetings and

ongoing essential SRP projects. These projects are necessary to support stock assessment and MP.

176. The cost estimates presented in the 2028 and 2029 indicative budgets for the Gene Tagging and CKMR projects represent the full ongoing project costs. These costs will be subject to review following the outcomes of the MP review in 2027 and do not represent any ongoing budgetary commitments. The ESC also asked that the budget document that the Secretariat will submit to the EC include options to stabilise the costs of the CKMR projects across the three-year period.

17.2. Timing, length and structure of next meeting

177. Discussion for this sub-agenda item commenced by correspondence in advance of the ESC.

178. The Chair advised that the EC has agreed on tentative dates for the CCSBT's main meetings in 2027 and the agreed tentative dates for the next ESC meeting are from Monday 30 August to Friday 3 September 2027 inclusive in Cape Town, South Africa.

179. ESC agreed that, based on the preferred timing and location for the OMMP in recent years, the next OMMP meeting will take place during the week starting 21 June 2027 in Seattle, USA, as a 5-day hybrid meeting.

Agenda Item 18. Other Matters

18.1. Agreement under the United Nations (UN) Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ)

180. Discussion for this sub-agenda item partly commenced by correspondence in advance of the ESC.

181. The Secretariat submitted paper CCSBT-ESC/2608/09 providing information on the current status of the BBNJ Agreement and on matters that may be relevant to the ESC's future work. The Agreement under the United Nations (UN) Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement) entered into force in January 2026, and preparatory work on various aspects is ongoing among the Parties. As discussions progress toward implementation of the BBNJ Agreement, the implications of the Agreement for the CCSBT are also becoming increasingly evident. In light of this, the paper presented a summary of the general relationship between the BBNJ Agreement and the CCSBT, as well as the elements of the BBNJ Agreement considered particularly relevant to the CCSBT-ESC, such as Area-based Management Tools (ABMTs) including Marine Protected Areas (MPAs), Environmental Impact Assessment (EIA), and the Clearing House. The Secretariat noted that four Members of the Extended Commission have already ratified the BBNJ Agreement and are therefore in a position to participate in the BBNJ process with voting rights. The Secretariat encouraged these Members to take a proactive role, including supplementing the information provided by the Secretariat as

necessary, leading discussions within the ESC for necessary actions, and conveying the CCSBT's perspectives in the BBNJ forum.

182. One Member expressed its appreciation for the Secretariat's detailed work in clarifying the possible relationship between the BBNJ Agreement and the ESC, and stated its intention to fulfil its appropriate role as a Party to the BBNJ Agreement.

183. The ESC noted the information provided by the Secretariat and agreed to retain an agenda item on the BBNJ Agreement at future ESC meetings.

18.2. Common Oceans Tuna Project Workshop on Stock Assessment

184. The Secretariat submitted paper CCSBT-ESC/2608/Info01, which provided the letter from ICCAT on the Common Oceans Tuna Project Workshop on Stock Assessment. In this letter, ICCAT invited the CCSBT to attend a joint tRFMO technical workshop on stock assessment. ICCAT indicated that potential outputs from this workshop could include a prioritised data-and-methods roadmap, guidance for representing persistent assessment uncertainty in MSE, a decision-relevance matrix, and a practical assessment-MSD handoff protocol. ICCAT invited each tRFMO, including CCSBT, to nominate up to two experts to receive financial support to attend the workshop.

185. The meeting agreed to nominate Dr Darcy Webber (OMMP Consultant) and Ms Paige Eveson (Australia) to attend this workshop as the CCSBT representatives.

Agenda Item 19. Adoption of Meeting Report

186. The report was adopted.

Agenda Item 20. Close of meeting

187. Members expressed their sincere appreciation to Dr Kevin Stokes for his many years of dedication and substantial contributions as Chair of the CCSBT Extended Scientific Committee.

188. The meeting closed at 04:59 pm on 27 August 2026.

List of Attachments

Attachments

1 List of Participants

2 Agenda

3 List of Documents

4 Global Reported Catch by Flag

5 Report from CCSBT Subsidiary Bodies on Progress Against Strategic Plan

6 Terms of Reference for Stage 1 Review of the Cape Town Procedure

7 Recent trends in all indicators of the SBT stock

8 Report on Biology, Stock Status and Management of Southern Bluefin Tuna: 2026

9 Data Exchange Requirements for 2027

10 ESC's three-year workplan, including resource requirements

Attachment 1

List of Participants
Extended Scientific Committee Meeting
of the Thirty-First Meeting of the Scientific Committee

Note: Participants shown with light-blue highlighting are Online Viewers.

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Attachment 2

Agenda
Extended Scientific Committee for the Thirty-First Meeting of the Scientific Committee
24 – 28 August 2026
Brussels, Belgium

1. **Opening**
   - 1.1. Introduction of Participants
   - 1.2. Administrative Arrangements

2. **Appointment of Rapporteurs**

3. **Adoption of Agenda and Document List**

4. **Review of SBT Fisheries**
   - 4.1. Presentation of Annual Reports
   - 4.2. Secretariat Review of Catches

5. **Report from the Sixteenth Operating Model and Management Procedure (OMMP) Technical Meeting**

6. **Actions under the CCSBT Strategic Plan**
   - 6.1. Report back against the objectives of the Strategic Plan
   - 6.2. Capacity Building Workplan
     - 6.2.1. Capacity building needs assessment
     - 6.2.2. Potential capacity building projects

7. **Review of results of the Scientific Research Program and other inter-sessional scientific activities**
   - 7.1. Results of scientific activities
   - 7.2. Maintenance and development of OMMP Code
   - 7.3. Update on NCNM estimates of unaccounted (fishing) mortality
   - 7.4. Terms of Reference of the MP Review in 2027

8. **Fisheries and Scientific Indicators of Stock Status**

9. **SBT Stock Assessment**

10. Operation of the Management Procedure and SBT Management Advice

10.1. Evaluation of meta-rules and exceptional circumstances

10.2. Consideration of the potential impacts on the ESC's scientific advice arising from possible changes in Members' allocations

10.3. Confirmation of Management Procedure recommended TAC for 2027-2029

10.4. Summary of SBT management advice

11. Potential impacts of climate change

12. Update of the Scientific Research Program (SRP)

12.1. Long-term planning for gene tagging program

12.2. Multi-National Fishery Longline CPUE Data Standardisation Project

13. Report from the Sixteenth Meeting of the Ecologically Related Species Working Group

14. Electronic Monitoring Systems (EMS)

15. Requirements for Data Exchange in 2027

16. Research Mortality Allowance

17. Workplan, Timetable and Research Budget for 2027 (and beyond)

17.1. Overview, time schedule and budgetary implications of proposed 2027 research activities and implications of Scientific Research Program for the work plan and budget.

17.2. Timing, length and structure of next meetings (including ESC, OMMP and relevant subsidiary bodies).

18. Other Business

18.1. Agreement under the United Nations (UN) Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ)

18.2. Common Oceans Tuna Project Workshop on Stock Assessment

19. Adoption of Meeting Report

20. Close of Meeting

Attachment 3

List of Documents
Extended Scientific Committee
for the Thirty-First Meeting of the Scientific Committee

(CCSBT-ESC/2608/)

1. Provisional Agenda
2. List of Participants
3. List of Documents

4 (Rev.1). (Secretariat) Secretariat review of catches (ESC agenda item 4.2)

5. (Secretariat) Report on progress against Strategic Plan (ESC Agenda item 6.1)
6. (Secretariat) Capacity Building Needs Assessments (ESC Agenda item 6.2.1)
7. (Secretariat) Report from the Ecologically Related Species Working Group (ESC Agenda item 13)
8. (Secretariat) Data Exchange (ESC Agenda item 15)
9. (Secretariat) Current status of the Agreement under the United Nations (UN) Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ) (ESC Agenda item 18.1)
10. (CCSBT) Update on the Gene-tagging recruitment monitoring program 2026 (ESC Agenda item 7.1 and 16)
11. (CCSBT) Update on the SBT close-kin tissue sampling, processing and kin-finding 2026 (ESC Agenda item 7.1)
12. (CCSBT) Update on SBT catch monitoring and biological sampling in Indonesia (ESC Agenda item 7.1)
13. (CCSBT) Gene-tagging proposal for 2027-29 (ESC Agenda item 12.1)
14. (CCSBT) Workplan and budget for close-kin mark recapture and Indonesian length/age monitoring (ESC Agenda item 12.1)
15. (Australia) Preparation of Australia's southern bluefin tuna catch and effort data submission (ESC Agenda item 4.1)
16. (Australia) Update on Australian otolith collection and ageing in 2026 (ESC Agenda item 7.1)
17. (Australia) Update on recent satellite tag deployments on juvenile SBT in the Great Australian Bight (ESC Agenda item 7.1 and 16)
18. ~~(Australia) Terms of reference for review of performance of the MP (ESC Agenda item 7.4)~~
19. (Australia) Fisheries indicators for the southern bluefin tuna stock 2025–26 (ESC Agenda item 8)

20. (Australia and Japan) Stock assessment 2026 (ESC Agenda item 9)
21. (Australia) Evaluation of exceptional circumstances - SBT 2026 (ESC Agenda item 10.1)
~~22. (Australia) E-tagging – RMA request 2027 and usage 2025 (ESC Agenda item 16)~~
23. (Japan) Report of the trolling monitoring survey for the age-1 southern bluefin tuna recruitment index in 2026 (ESC Agenda item 7.1)
24. (Japan) Report of the age-0 southern bluefin tuna distribution off the west coast of Western Australia in 2026 (ESC Agenda item 7.1)
25. (Japan) Trolling indices for age-1 southern bluefin tuna: update of the grid type trolling index in 2026 (ESC Agenda item 7.1)
26. (Japan) Summary report of archival tagging from the trolling survey in 2026 by Japan (ESC Agenda item 7.1)
27 (Rev.1). (Japan) Summary of fisheries and scientific survey indicators of southern bluefin tuna stock in 2026 (ESC Agenda item 8)
28. (Japan) A check of operating model predictions from the viewpoint of implementation of the management procedure in 2026 (ESC Agenda item 10.1)
29. (Japan) Report of the 2025/2026 RMA utilization and application for the 2026/2027 RMA from Japan (ESC Agenda item 16)
30. (Korea) Korean SBT otolith collection activities in 2025 (ESC Agenda item 7.1)
31. (Korea) Comparison of standardized SBT CPUE indices between Korea and Japan (ESC Agenda item 7.1)
32. (New Zealand, Australia and Japan) Review of performance of the Cape Town procedure (ESC Agenda item 7.4)
33 (Rev.1). (New Zealand and Australia) Electronic Monitoring and Scientific Observer Program Standards (ESC Agenda item 14)
34. (Taiwan) Preparation of Taiwan's Southern Bluefin Tuna catch and effort data submission for 2025 (ESC Agenda item 4.1)
35. (Taiwan) Gonadal information and histological analysis of Southern Bluefin Tuna collected by Taiwanese scientific observer program with updated data (ESC Agenda item 7.1)
36. (Taiwan) CPUE standardization analyses for Southern Bluefin Tuna based on the Taiwanese longline fishery data from 2002 to 2025 (ESC Agenda item 7.1)
37. (Taiwan) Updated ageing data of the SBT caught by Taiwanese longliners in 2024 (ESC Agenda item 7.1)
38. (Japan) Calculation of the coefficient of variation of GAM22 CPUE index for the SBT assessment in 2026 (ESC Agenda item 9)

39. (South Africa) Proposal: Introductory workshop to otolith-based ageing of southern bluefin tuna (ESC Agenda item 6.2.1 and 6.2.2)

(CCSBT-ESC/2608/BGD)

1. (CCSBT) Estimates of unreported SBT catch by CCSBT non-cooperating non-member states between 2007 and 2023 (ESC Agenda item 7.3) (*previously* CCSBT-OMMP/2606/04)
2. (Japan) Change in operation pattern of Japanese southern bluefin tuna longliners in the 2025 fishing season (ESC Agenda item 7.1) (*previously* CCSBT-OMMP/2606/05)
3. (Japan) Update of CPUE abundance index using GAM for southern bluefin tuna in CCSBT (GAM22) up to the 2025 data (ESC Agenda item 7.1) (*previously* CCSBT-OMMP/2606/06)
4. (Japan) Proposal of a method for checking abundance indices obtained from CPUE (ESC Agenda item 7.1) (*previously* CCSBT-OMMP/2606/07 (Rev.1))
5. (Korea) Data Exploration and CPUE Standardization for the Korean Southern Bluefin Tuna Longline Fishery (1996-2025) (ESC Agenda item 7.1) (*previously* CCSBT-OMMP/2606/08)
6. (Australia) Ensuring the SBT MP advice is robust to impacts of climate change (ESC Agenda item 11) (*previously* CCSBT-ESC2508/19)

(CCSBT-ESC/2608/SBT Fisheries -)

Australia	Australia's 2024–25 southern bluefin tuna fishing season
European Union	
Indonesia	Indonesia's tuna longline fishery interacted with Southern Bluefin Tuna in 2025
Japan	Review of Japanese Southern Bluefin Tuna Fisheries in 2025
Korea	2026 Annual National Report of Korean SBT Fishery
New Zealand	New Zealand Annual Report to the Extended Scientific Committee
South Africa	South African National Report to the Extended Scientific Committee of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), 2025
Taiwan	Review of Taiwan SBT Fishery of 2024/2025

(CCSBT-ESC/2608/Info)

1. (Secretariat) Letter from ICCAT on Common Oceans Tuna Project Workshop on Stock Assessment (ESC Agenda item 18.2)

(CCSBT-ESC/2608/Rep)

1. Report of the Sixteenth Operating Model and Management Procedure Technical Meeting (June 2026)
2. Report of the Sixteenth Meeting of the Ecologically Related Species Working Group (March 2026)
3. Report of the Thirty-Second Annual Meeting of the Commission (October 2025)
4. Report of the Twentieth Meeting of the Compliance Committee (October 2025)
5. Report of the Thirtieth Meeting of the Scientific Committee (August 2025)
6. Report of the Fifteenth Operating Model and Management Procedure Technical Meeting (July 2025)
7. Report of the Thirty-First Annual Meeting of the Commission (October 2024)
8. Report of the Twenty-Ninth Meeting of the Scientific Committee (September 2024)
9. Report of the Fourteenth Operating Model and Management Procedure Technical Meeting (June 2024)
10. Report of the Twenty-Eighth Meeting of the Scientific Committee (August – September 2023)

Global Reported Catch By Flag

Reviews of southern bluefin tuna data presented to a special meeting of the Commission in 2006 suggested that the catches may have been substantially under-reported over the previous 10 to 20 years. The data presented here do not include estimates for this unreported catch.
All shaded figures are subject to change as they are either preliminary figures or they have yet to be finalised.
Blank cells are unknown catch (many would be zero).

	Australia			New Zealand									
Calendar Year	Commercial	Amateur	Japan	Commercial	Amateur	Korea	Taiwan	Philippines	Indonesia	South Africa	European Union	Miscellaneous	Research & Other
1952	264		565	0		0	0	0	0	0	0	0	
1953	509		3,890	0		0	0	0	0	0	0	0	
1954	424		2,447	0		0	0	0	0	0	0	0	
1955	322		1,964	0		0	0	0	0	0	0	0	
1956	964		9,603	0		0	0	0	0	0	0	0	
1957	1,264		22,908	0		0	0	0	0	0	0	0	
1958	2,322		12,462	0		0	0	0	0	0	0	0	
1959	2,486		61,892	0		0	0	0	0	0	0	0	
1960	3,545		75,826	0		0	0	0	0	0	0	0	
1961	3,678		77,927	0		0	0	0	0	145	0	0	
1962	4,636		40,397	0		0	0	0	0	724	0	0	
1963	6,199		59,724	0		0	0	0	0	398	0	0	
1964	6,832		42,838	0		0	0	0	0	197	0	0	
1965	6,876		40,689	0		0	0	0	0	2	0	0	
1966	8,008		39,644	0		0	0	0	0	4	0	0	
1967	6,357		59,281	0		0	0	0	0	5	0	0	
1968	8,737		49,657	0		0	0	0	0	0	0	0	
1969	8,679		49,769	0		0	80	0	0	0	0	0	
1970	7,097		40,929	0		0	130	0	0	0	0	0	
1971	6,969		38,149	0		0	30	0	0	0	0	0	
1972	12,397		39,458	0		0	70	0	0	0	0	0	
1973	9,890		31,225	0		0	90	0	0	0	0	0	
1974	12,672		34,005	0		0	100	0	0	0	0	0	
1975	8,833		24,134	0		0	15	0	0	0	0	0	
1976	8,383		34,099	0		0	15	0	12	0	0	0	
1977	12,569		29,600	0		0	5	0	4	0	0	0	
1978	12,190		23,632	0		0	80	0	6	0	0	0	
1979	10,783		27,828	0		0	53	0	5	0	0	4	
1980	11,195		33,653	130		0	64	0	5	0	0	7	
1981	16,843		27,981	173		0	92	0	1	0	0	14	
1982	21,501		20,789	305		0	182	0	2	0	0	9	
1983	17,695		24,881	132		0	161	0	5	0	0	7	
1984	13,411		23,328	93		0	244	0	11	0	0	3	
1985	12,589		20,396	94		0	241	0	3	0	0	2	
1986	12,531		15,182	82		0	514	0	7	0	0	3	
1987	10,821		13,964	59		0	710	0	14	0	0	7	
1988	10,591		11,422	94		0	856	0	180	0	0	2	
1989	6,118		9,222	437		0	1,395	0	568	0	0	103	
1990	4,586		7,056	529		0	1,177	0	517	0	0	4	
1991	4,489		6,477	164		246	1,460	0	759	0	0	97	
1992	5,248		6,121	279		41	1,222	0	1,232	0	0	73	
1993	5,373		6,318	217		92	958	0	1,370	0	0	15	
1994	4,700		6,063	277		137	1,020	0	904	0	0	54	
1995	4,508		5,867	436		365	1,431	0	829	0	0	201	296
1996	5,128		6,392	139		1,320	1,467	0	1,614	0	0	295	290
1997	5,316		5,588	334		1,424	872	0	2,210	0	0	333	
1998	4,897		7,500	337		1,796	1,446	5	1,324	1	0	471	
1999	5,552		7,554	461		1,462	1,513	80	2,504	1	0	403	
2000	5,257		6,000	380		1,135	1,448	17	1,203	4	0	31	
2001	4,853		6,674	358		845	1,580	43	1,632	1	0	41	4
2002	4,711		6,192	450		746	1,137	82	1,701	18	0	203	17
2003	5,827		5,770	390		254	1,128	68	565	15	3	40	17
2004	5,062		5,846	393		131	1,298	80	633	19	23	2	17
2005	5,244		7,855	264		38	941	53	1,726	29	0	0	5
2006	5,635		4,207	238		150	846	50	598	15	3	0	5

Calendar Year	Australia		Japan	New Zealand		Korea	Taiwan	Philippines	Indonesia	South Africa	European Union	Miscellaneous	Research & Other
	Commercial	Amateur		Commercial	Amateur								
2007	4,813		2,840	379	4	521	841	46	1,077	58	18	0	3
2008	5,033		2,952	319	0	1,134	913	45	926	44	14	4	10
2009	5,108		2,659	419	0	1,117	921	47	641	40	2	0	0
2010	4,200	0	2,223	501	0	867	1,208	43	636	54	11	0	0
2011	4,200	0	2,518	547	0	705	533	45	842	64	3	0	1
2012	4,503	0	2,528	776	0	922	494	46	910	110	4	0	0
2013	4,902	0	2,694	756	1	918	1,004	46	1,383	67	0	0	0
2014	4,559	0	3,371	826	0	1,044	944	45	1,063	56	0	0	1
2015	5,824	0	4,745	922	1	1,051	1,162	0	593	63	0	0	0
2016	5,962	0	4,721	951	1	1,121	1,023	0	601	64	0	0	2
2017	5,221	0	4,567	913	21	1,080	1,171	0	835	136	0	0	2
2018	6,401	0	5,945	1,008	12	1,268	1,218	0	1,087	207	0	0	2
2019	6,185	270	5,851	959	2	1,238	1,229	0	1,206	160	0	0	0
2020	4,757	270	5,929	853	50	1,231	1,116	0	1,298	126	0	0	0
2021	5,459	270	6,452	788	57	1,241	1,274	0	1,123	161	0	0	0
2022	6,266	312	5,887	875	60	1,173	1,318	0	1,031	165	0	0	0
2023	5,850	312	6,335	1,103	69	1,305	1,135	0	1,031	109	0	0	1
2024	6,441	365	6,505	891	57	1,512	1,357	0	1,224	244	0	0	0
2025	6,516	365	7,375	680	64	1,495	1,594	0	1,172	227	0	0	0

European Union: From 2006, estimates are from EU reports to the CCSBT. Earlier catches were reported by Spain and the IOTC.
Miscellaneous: Before 2004, these were from Japanese import statistics (JIS). From 2004, the higher value of JIS and CCSBT TIS was used combined with available information from flags in this category.
Research and other: Mortality of SBT from CCSBT research and other sources such as discarding practices in 1995/96.

Attachment 5

Report from CCSBT Subsidiary Bodies on Progress Against Strategic Plan

Subsidiary Body: **ESC**	**Year**: **2026**

Vision and Goals

	Comments from Subsidiary Body
Management of SBT The Commission agrees the SBT tuna stock is to be managed at a biomass level that supports the maximum sustainable yield, and the risks related to fishing for SBT and impacts from fishing for SBT on ecologically related species are mitigated. • This includes strategies concerning stock rebuilding, allocation and ecologically related species. • This also includes consideration and review of all other risks including, but not limited to, marine pollution and human safety.	ESC supports the vision as described here. ESC has contributed to SBT stock rebuilding and management advice based on scientific evidence. The ESC considers that the SBT tuna stock is being rebuilt towards a biomass level that will support the MSY. The most recent stock assessment indicates that the stock is continuing to rebuildand is currently estimated to be at 28% of TRO_0. The ESC notes that demonstrating progress towards stock rebuilding has and will continue to rely on the substantial investment in innovative science including in genetic studies that has allowed a robust estimate of population size to support decision making on TACs, monitoring stock recovery and demonstrating progress towards the rebuilding targets. The current MP is based on sound science and processes which are unique in their approach to tuna fisheries management relative to approaches in other related RFMOs. The ESC provides advice on TACs based on a fully tested management procedure (MP). The ESC also applies an annual metarule framework to the MP that includes an annual review of indicators and a process to assess whether or not exceptional circumstances have occurred. The ESC notes advice from the ERSWG to the EC on ecologically related species, including seabirds. While not the responsibility of ESC, marine pollution, [climate change] and human safety is an important issue.
Operation/Administration of the Commission and Secretariat It was agreed the Commission should operate effectively and efficiently, to responsibly manage fishing for SBT.	ESC supports the strategic goals on the operation/administration of the Commission and Secretariat, and considers that opportunities for harmonising with other RFMOs should continue to be pursued, including for developing electronic monitoring (EM) standards. The ESC has regularly reviewed and updated the Scientific Research Program as well as the associated schedule and budget implications. The Commission and Secretariat should be aware of any implications that arise from the BBNJ agreement.

• fThis includes strategies for effective and efficient operation of Commission, its subsidiary bodies and Secretariat, including harmonisation with other RFMOs.	
Participation and implementation by Members, including Compliance Members are actively participating in management of SBT through the Commission and implementing its decisions. • This includes strategies concerning MCS, sanctions and assistance to developing countries.	The ESC also considers there has been progress with participation in ESC meetings and will continue to work toward the goal of maximising participation by all Members. The ESC notes that a robust monitoring, control and surveillance (MCS) program is critical to the assessment of the SBT and its recovery. The ESC also notes the importance of adequate observer coverage. The ESC has encouraged timely data collection and submission, and there has been some improvement recently. The ESC notes the importance of identifying any non-compliance, and the reasons for that non-compliance.

Action Plan

Action	Progress since previous report	Planned work
PR2021-02: Explore the need for additional measures (such as protected areas and area closures) to support spawning and recruitment.	As noted in the ESC28 Report, the ESC considers that there is no need for protected areas or area closures to protect the SBT spawning grounds.	Nil for ESC.
Further increase efforts, including analysis on the application of electronic monitoring, to improve and supplement observer coverage in accordance with Scientific Observer Program Standard (SOPS).	The ESC recently undertook a review of the potential impacts of EM on the collection of the data currently required under the existing SOPS. Members agreed to include an agenda item to address issues relating to EM/S in future meetings of the ESC. Since ESC 29, Members with operational EM programs have worked together intersessionally regarding how information is collected by EM and how this meets the requirements of the SOPS, and presented progress of this work this at ESC 31.	The ESC considers that there is merit in ensuring the development of the CCSBT EM standards is aligned with other relevant RFMOs.

	The ESC noted that capacity development work in EM had taken place as part of the Seabird Project.	
Prioritise the establishment and ongoing review of long-term research strategic planning in the ESC.	Each ESC includes this as a standing item on the Scientific Research Program, including a procedure for evaluating new research proposals.	Continue current annual process.
Ongoing Work Plan		
Action	**Changes since previous report**	**Planned work**
PR2021-01: Members continue to support the MP, by remaining within their allocation limits, and eliminating areas of uncertainty such as Non-Member catches that could undermine its performance.	ESC Members actively participated in the MP development and implementation through their research activities. This also includes assessing whether there have been exceptional circumstances. ESC31 concluded there are exceptional circumstances due to the CPUE estimate for 2025 being outside the 95% bound of projected CPUE values from operating models used in the Management Strategy Evaluation in 2019. The trend in CPUE is positive and therefore risks to the stock are currently low. so therefore decided not to alter its previous advice on the 2027-2029 TAC block. The ESC considered non-member catches in the 2026 stock assessment and recommended a TAC to CCSBT based on an estimated level of unaccounted mortality.	The ESC notes the importance of a strong compliance framework to ensure that catch limits are maintained. Consider further analysis of markets to better understand possible non-member catch. Non-member catch estimation was conducted in 2026 as part of CCSBT's SRP project.
PR2021-26: Continue monitoring to ensure the effectiveness of the rebuilding strategy for SBT	The ESC supports this action and notes that this has been made possible through the implementation of the Close-Kin, Gene Tagging and efforts to improve the standardisation of CPUE projects. The ESC strongly recommends establishing a long-term funding arrangement for the Gene Tagging program and other monitoring programs that provide input data to the MP.	ESC recommends continued support for and implementation of science projects to meet this action under the CCSBT Strategic Plan. Funding priority should be given to the monitoring programs that provide input data to the MP and implementation of the MP, to ensure that robust advice is given

	The ESC has monitored and discussed the national reports and results, and progress of the research activities. Ongoing work around development of EM standards for CCSBT.	to the Commission to meet the objectives of conservation and optimal utilisation of the stock.
PR2021-12: Continue to develop and embed innovative methods such as gene-tagging and close kin mark-recapture to improve scientific processes.	Updates to the Operating Model have been completed and used for the stock assessment in 2026. ESC has discussed and reviewed the progress and results of gene-tagging and Close-Kin regularly. The gene tagging budget was reinstated for 2026.	
PR2021-24: CCSBT should continue to implement CMMs based on ESC and ERSWG advice for both target and non-target species.	Implementation of CMM's has been possible given a robust stock assessment conducted in 2023. Updates to the operating model have been completed for running the stock assessment in 2026. The Management Procedure was run in 2025 to provide advice on the SBT TAC for the next CMM, and the ESC reconfirmed the recommendation in 2026.	The ESC supports progress towards this action and notes effective monitoring of fishing activity, including through observer coverage or EM programs, is essential. The ESC also notes that implementation of CMM's relies on a strong compliance program.
PR2021-55: ESC to improve accessibility of reports to non-technical readers.	ESC has developed and made available each meeting report. This has included a Chair's summary for each ESC in non-technical language to help facilitate communication with the EC/other subsidiary bodies.	Continue the current process.
Ensure members are submitting high quality, clear, consistent, and completed reporting.	ESC has encouraged all Members to submit annual reports, and there have been some improvements recently. The ESC notes that not all Members submit reports as required.	The ESC will continue to encourage all Members to submit high quality, clear, consistent and completed reports.
PR2021-16: Continue to study the spatial aspects of the SBT stock structure and movements, and the fleets that exploit SBT.	Tagging projects continue to be delivered to improve understanding of stock structure.	Work developing a multiple fleet CPUE index (addressing effects of contraction

	The ESC now has a standing Agenda Item “Potential impacts of climate change”.	of the spatial distribution of the core Japanese fleet) is proposed in the SRP.

Stage 1 Review of the Cape Town Procedure

Status	Draft for discussion
Review stage	Stage 1 - evaluation of the existing, unchanged CTP
Evaluation period	Prospective evaluation from the 2026 OM stock status through to 2041

Preamble: Current stock status and experience with the CTP

The Commission has committed to a performance review of the Cape Town MP (CTP) in 2027, as prescribed in the meta-rules adopted in 2020. The ESC agreed to recommend a two-stage review process. Stage 1 would summarise historical outcomes of the CTP, review the continuity, timeliness and reliability of its principal data inputs and the implications of potential changes to those inputs, and evaluate the expected future performance of the existing, unchanged CTP using the 2026 OM. The review would identify any substantive deviations from expected performance, together with aspects of the management approach that may warrant reconsideration. If Stage 1 indicates that revision may be needed, Stage 2, subject to Commission direction, would examine the relevant objectives and develop and evaluate potential revisions to the approach.

1. Purpose and scope

This section constitutes Stage 1 of the review of the Cape Town Procedure (CTP).

Principal question: Does the existing CTP continue to perform as expected under the 2026 OM, considering the Commission's objectives, the original data inputs, and potential changes to those inputs?

To answer this question, the ESC will:

a. Evaluate the existing, unchanged CTP using the 2026 reference OM and an appropriate set of robustness trials to characterize its conservation, catch and operational performance.
b. Identify any substantive deviations from expected performance and consider their potential management relevance.
c. Where substantive deviations are identified, or the existing management procedure may no longer be appropriate, identify the elements of the procedure that may require reconsideration.

Stage 1 will not establish a new management objective, retune the CTP, develop or select a replacement MP, or make final decisions about future monitoring and the associated expenditure. Those activities would require Commission direction and, where appropriate, a separately agreed Stage 2 work programme.

The final Stage 1 MP review will be delivered at ESC 32.

2. Future performance evaluation period

Period	Treatment	Purpose
2026-2029	Agreed TACs treated as fixed	Initial period evaluated under the 2026 OM stock state
2030-2035	First two future CTP-determined TAC blocks	Performance through the current rebuilding target year
2036-2041	Two post-target CTP-determined TAC blocks	Durability of rebuilding, catch performance and TAC stability

The performance evaluation will be prospective, beginning from the stock status estimated by the 2026 OM and extending through 2041. This horizon covers four CTP-controlled TAC blocks, while retaining the current 2035 rebuilding target as an explicit evaluation point.

The first simulated CTP-generated TAC will apply in 2030. Experience from implementation of the CTP since its adoption, including realized stock, catch, monitoring and exceptional-circumstances outcomes, will be summarized separately as context for interpreting the prospective evaluation.

The 2041 endpoint is presented provisionally because it would cover four future three-year CTP-controlled TAC blocks beginning in 2030. The final projection endpoint will be determined as the review develops.

3. Apply the unchanged CTP to the 2026 OM

The existing CTP will be applied, without retuning or structural modification, to the 2026 reference OM and to robustness trials representing material uncertainties or changes in data, knowledge, monitoring and fishery conditions that have arisen since the CTP was adopted.

The review will use the CTP's adopted operational rules, including three-year TAC blocks and current constraints on TAC changes. Although no technical modifications to the CTP are anticipated, any modification required solely to run the CTP with the 2026 OM must be documented and demonstrated not to change the CTP's intended behaviour.

4. Evaluation and identification of substantive deviations

The ESC will evaluate the conservation, rebuilding, catch and operational performance of the unchanged CTP under the 2026 reference OM and robustness trials. The review will use a concise set of measures and graphical summaries to show the range and trajectory of stock, catch and stability outcomes, responsiveness to changing conditions, and relevant lower-tail risks, rather than relying only on central estimates only.

Performance will be interpreted in light of the Commission's current objective, the present stock status and the uncertainty represented in results for the 2026 OM. The review will examine the influence of estimated initial stock status, population dynamics, data inputs and observation processes, structural assumptions, the representation of parameter uncertainty, the response of the CTP itself, and the operational availability and reliability of monitored inputs. It will identify any substantive deviations from expected CTP performance and assess their potential management relevance, including whether they may warrant reconsideration of the management procedure. Greater variation resulting from a more complete representation of uncertainty will not automatically be interpreted as deterioration in CTP

performance. The specific measures, summaries and presentation methods will be determined as the review develops.

5. Review of input data and monitoring assumptions

The ESC will review direct inputs to the CTP (i.e., CPUE, gene-tagging, and CKMR) for their continuity, timeliness and reliability, potential sources of bias and uncertainty, and the consequences of missing, delayed or materially changed data. The review will also consider costs and feasible alternatives and provide these for consideration by the Extended Commission.

The review will consider data used to condition the OM, including direct-age, composition, conventional-tagging, aerial-survey and unaccounted-mortality information, where changes could materially affect the evaluation of the CTP performance. The precise methods and implementation of trials will be determined as the review develops.

5.1 CPUE

Review whether the CPUE series and analysis provide an appropriate abundance signal for operation and evaluation of the CTP, including the implications of recent observations, alternative standardisations, changes in fishery behaviour, and relevant observation uncertainty.

5.2 Close-kin mark-recapture

Review the information provided by the CKMR data, the continuity and adequacy of sampling, and the principal sources of uncertainty that may affect operation and evaluation of the CTP.

5.3 Gene tagging

Evaluate the contribution of gene-tagging information to CTP performance. Gene-tagging data scenarios will be considered in combination with robustness trials designed to create conditions under which the value of the associated information can be demonstrated, including conditions under which recruitment information or continuity of the monitoring series may be particularly important. The range and implementation of scenarios will be determined as the review develops. The review should also evaluate the implications of alternative gene-tagging programme frequencies and sampling intensities, including their effects on CTP performance, uncertainty, and programme costs, to inform consideration of the long-term financial sustainability of monitoring programmes.

6. Robustness trials

The ESC will develop and justify a set of robustness trials to identify conditions under which the existing CTP may exhibit substantive deviations from expected performance, particularly in relation to new knowledge about the resource gained since the CTP was adopted in 2019. Trials may address uncertainty in recruitment and productivity, stock and fishery dynamics, abundance indices and observation processes, monitoring continuity and precision, unaccounted mortality, and combinations of adverse conditions. They will also allow the influence of individual monitoring inputs, including gene-tagging data, to be examined where conditions under which the information may materially affect CTP performance can be demonstrated. The selection, priority, combination and technical implementation of trials will be determined as the review develops, while distinguishing plausible high-priority cases, informative lower-priority cases and extreme stress tests used to identify potential failure modes.

7. Stage 1 determination

Stage 1 is a screening review of the existing CTP, rather than a process for developing or selecting an alternative MP. Its findings therefore lead to two possible recommendations: continue the existing management procedure, potentially with routine technical or monitoring improvements, or seek Commission direction for a Stage 2 process where substantive deviations or other concerns indicate that revision of the procedure may be required.

8. Work programme and review arrangements

The ESC will specify:

- required analyses and software development;
- the agreed reference and robustness trials;
- responsible analysts and participating Members;
- independent checking and quality assurance;
- opportunities for Member participation and capacity development;
- technical meetings, milestones and deadlines; and
- budget and personnel requirements.

9. Stage 1 deliverables

- An evaluation of the unchanged CTP under the 2026 OM over the agreed prospective evaluation period, including the reference case and an appropriate set of robustness trials.
- An assessment of the role and influence of the CTP's principal monitoring inputs, including gene-tagging information where relevant conditions can be demonstrated.
- An assessment identifying any substantive deviations from expected performance and their potential management relevance.
- A recommendation either to continue the existing management procedure or to seek Commission direction for Stage 2 of the revision.

Attachment 7

Recent trends in all indicators of the SBT stock

Indicator	Period	Min.	Max.	2022	2023	2024	2025	2026	12-month trend	Main Ages	NOTES
Trolling index (piston line)	1996–2003 2005–06 2006–14 2016–26	0.00 (2018, 2019)	5.09 (2011)	0.887	0.240	0.932	1.991	0.822	↓	1	
Trolling index (grid)	1996–2003 2005–14 2016–26	0.256 (2002)	1.786 (2011)	0.644	0.758	0.648	0.905	0.821	↓	1	
Gene tagging	2016–24	1.14 (2018)	3.53 (2024)	1.97	2.62	3.53			↑	2	
CKMR hit rate	2010–21	6.03e-7 (2020)	1.13e-6 (2010)	–	–	–			–	juveniles/spawners	
NZ domestic standardised CPUE	2003–2025	0.297 (2006)	2.98 (2023)	2.68	2.98	2.95	1.99		↓	all	
NZ domestic age/size composition (proportion age 0–5 SBT)*	1980–2025	0.001 (1985)	0.55 (2025)	0.32	0.32	0.48	0.55		↑	2-5	Peripheral Area
Indonesian mean size class**	1993–2022; 2025	158.16 (2014)	188.06 (1994)	161.55	–	–	163.3		↑	spawners	
Indonesian age composition:** mean age on spawning ground, all SBT	1994–2021	12.59 (2014)	21.19 (1995)	12.78	–	–	–		–	spawners	
Indonesian age composition:** mean age on spawning ground 20+	1994–2021	22.35 (2016)	25.29 (2004)	23.29	–	–	–		–	older spawners	
Indonesian age composition:** median age class on spawning ground	1994–2021	10 (multiple years)	21 (multiple years)	10	–	–	–		–	spawners	

Indicator	Period	Min.	Max.	2022	2023	2024	2025	12-month trend	Main Ages	Notes
Japanese nominal CPUE, age 4+	1969–2025	0.31 (2006)	2.55 (2025)	2.05	1.90	2.22	2.55	↑	4+	
Japanese standardised CPUE, age 4+ (GAM series for OM/MP)	1969–2025	0.32 (2006)	2.76 (2025)	2.15	1.72	2.01	2.76	↑	4+	
Korean nominal CPUE	1991–2025	1.312 (2004)	21.523 (1991)	7.980	9.032	13.579	19.080	↑	4+	Bycatch effects
Korean standardised CPUE Area 8	1996–2025	0.27 (2002)	2.58 (2023)	–	2.58	1.86	–	–	4+	
(selected data) Area 9	1996–2025	0.16 (2005)	3.94 (2025)	1.33	1.62	3.48	3.94	↑		
Korean standardised CPUE Area 8	1996–2025	0.28 (2002)	2.70 (2023)	–	2.70	1.93	–	–	4+	
(clustered) Area 9	1996–2025	0.18 (2005)	3.93 (2025)	1.31	1.59	3.47	3.93	↑		
Taiwanese nominal CPUE, Areas 8+9	1981–2025	<0.001 (1985)	0.956 (1995)	0.849	0.700	0.495	0.701	↑	2+	Bycatch effects
Taiwanese nominal CPUE, Areas 2+14+15	1981–2025	<0.001 (1985)	3.683 (2005)	2.338	1.644	2.567	3.683	↑	2+	Bycatch effects
Taiwanese standardised CPUE (Area E)	2002–25	0.098 (2004)	0.922 (2022)	0.874	0.662	0.742	0.850	↑	2+	In development
(Area W)	2002–25	0.162 (2024)	1.286 (2004)	0.244	0.224	0.162	0.412	↑		Bycatch effects
Japanese age comp, age 3*	1969–2025	0.011 (2015)	0.228 (2007)	0.074	0.144	0.205	0.161	↓	3	Affected by release/discards
Japanese age comp, age 4*	1969–2025	0.091 (1967)	0.276 (2025)	0.218	0.100	0.184	0.276	↑	4	
Japanese age comp, age 5*	1969–2025	0.063 (1988)	0.300 (2010)	0.140	0.147	0.073	0.127	↑	5	
Taiwanese age/size comp, age 0–2*	1981–2025	<0.001 (1982)	0.251 (2001)	0.005	0.004	0.011	0.020	↑	Mostly 2	
Taiwanese age/size comp, age 3*	1981–2025	0.024 (1996)	0.349 (2001)	0.074	0.077	0.108	0.145	↑	3	
Taiwanese age/size comp, age 4*	1981–2025	0.027 (1996)	0.502 (1999)	0.237	0.184	0.213	0.187	↓	4	
Taiwanese age/size comp, age 5*	1981–2025	0.075 (1997)	0.428 (2018)	0.365	0.328	0.323	0.325	↑	5	
Australia surface fishery median age composition	1964–2025	age 1 (1979–80)	age 3 (multiple years)	age 2	age 2	age 2	age 2	–	1-4	

Indicator		Period	Min.	Max.	2022	2023	2024	2025	12-month trend	Ages	Notes
Jpn LL standardised CPUE (age 3)	w0.5^	1969–2025	0.21 (2003)	3.31 (2024)	1.64	2.54	3.31	1.88	↓	3	Affected by release/discard
	w0.8		0.22 (2003)	4.26 (2024)	2.16	3.29	4.26	2.39			
Jpn LL standardised CPUE (age 4)	w0.5^	1969–2025	0.24 (2006)	3.41 (2025)	3.00	1.35	2.03	3.41	↑	4	
	w0.8		0.24 (2006)	4.29 (2025)	3.75	1.73	2.64	4.29			
Jpn LL standardised CPUE (age 5)	w0.5^	1969–2025	0.22 (2006)	2.59 (1972)	1.78	2.00	1.10	1.78	↑	5	
	w0.8		0.22 (2006)	2.57 (2023)	2.30	2.57	1.46	2.29			
Jpn LL standardised CPUE (age 6&7)	w0.5^	1969–2025	0.17 (2007)	2.41 (1976)	1.07	1.41	1.71	1.68	↓	6-7	
	w0.8		0.19 (2007)	2.31 (2024)	1.39	1.82	2.31	2.23			
Jpn LL standardised CPUE (age8-11)	w0.5^	1969–2025	0.26 (2007)	3.82 (1969)	1.01	1.33	1.13	1.16	↑	8-11	
	w0.8		0.27 (1992)	3.21 (1969)	1.35	1.74	1.56	1.57			
Jpn LL standardised CPUE (age 12+)	w0.5^	1969–2025	0.43 (2017)	3.44 (1970)	0.94	1.50	1.19	1.12	↓	12+	
	w0.8		0.56 (1997)	2.83 (1970)	1.25	1.96	1.63	1.52			

* Derived from size data; ** Indonesian catch not restricted to just the spawning grounds since 2012–13; na = not available

^ All the Jpn LL standardised CPUE indicators are based on the standardisation model by Nishida and Tsuji (CCSBT/SC/9807/13) using all vessel data. w0.5 and w0.8 refer to the weighting in the formula of the indicator calculation, w*VS + (1-w)*CS (VS and CS represent Variable Square and Constant Square hypotheses, respectively).

Attachment 8

Report on Biology, Stock Status and Management of Southern Bluefin Tuna: 2026

The CCSBT Extended Scientific Committee (ESC) updated the stock assessment and conducted a review of fisheries indicators in 2026 to provide updated information on the status of the stock. The next stock assessment is scheduled in 2029. This report updates the description of fisheries and the state of stock as advised in 2026 by the ESC using the most recent information.

1. Biology

Southern bluefin tuna (*Thunnus maccoyii*) are found in the southern hemisphere, mainly in waters between 30° and 50° S, but only rarely in the eastern Pacific. The only known spawning area is in the Indian Ocean, south-east of Java, Indonesia. Spawning takes place from September to April in warm waters south of Java and juvenile SBT migrate south down the west coast of Australia. During the summer months (December-April), they tend to congregate near the surface in the coastal waters off the southern coast of Australia and spend their winters in deeper, temperate oceanic waters. Results from recaptured conventional and archival tags show that young SBT migrate seasonally between the south coast of Australia and the central Indian Ocean. After age 5 SBT are seldom found in nearshore surface waters, and their distribution extends over the southern circumpolar area throughout most of the Pacific, Indian and Atlantic Oceans.

SBT can attain a length of over 2m and a weight of over 200kg. Direct ageing using otoliths indicates that a substantial number of fish larger than 160cm are older than 25 years, and the maximum age obtained from otolith readings has been 42 years. Analysis of tag returns and otoliths indicate that, compared to the 1960s, growth rate has increased since about 1980 during the period when the stock was declining. There is some uncertainty about the size and age when SBT mature, but available data indicate that SBT do not mature younger than 8 years (155cm fork length), and perhaps as old as 15 years. SBT exhibit age-specific natural mortality, with M being higher for young fish and lower for old fish, increasing again prior to senescence.

Given that SBT have only one known spawning ground, and that no morphological differences have been found between fish from different areas, SBT are considered to constitute a single stock for management purposes.

2. Description of Fisheries

Reported catches of SBT up to the end of 2025 are shown in Figures 1 - 3. Note that a 2006 review of SBT data indicated that there may have been substantial under-reporting of SBT catches and surface fishery bias in the previous 10 - 20 year period, and there is currently substantial uncertainty regarding the true levels of total SBT catch over this period. The SBT stock has been exploited for more than 50 years, with total catches peaking at 81,750t in 1961 (Figures 1 - 3). Over the period 1952 - 2025, 76.6% of the reported catch was taken by longline, 10.6% using purse-seine, and

12.8% using other gears (Figure 1). The proportion of reported catch made by the purse seine fishery peaked at 48% in 2006, averaging 32.4% since 1996 (Figure 1). The Japanese longline fishery (taking a wide age range of fish) recorded its peak catch of 77,927t in 1961 (Figure 3). New Zealand, the Fishing Entity of Taiwan and Indonesia have also exploited southern bluefin tuna since the 1970s - 1980s, and Korea started a fishery in 1991.

On average, 78% of the SBT catch has been made in the Indian Ocean, 17% in the Pacific Ocean and 5% in the Atlantic Ocean (Figure 2). The reported annual Atlantic Ocean catch has varied widely between about 18t and 8,200t since 1968 (Figure 2), averaging 1,733t over the past two decades. This variation in catch reflects shifts in longline effort between the Atlantic and Indian Oceans. Fishing in the Atlantic occurs primarily off the southern tip of South Africa (Figure 4). Since 1968, the reported Indian Ocean catch has declined from about 45,000t to less than 10,000t, averaging 17,442t, and the reported Pacific Ocean catch has ranged from about 800t to 19,000t, averaging 4,989t over the same period[1].

3. Summary of Stock Status

Since 2017, CCSBT has measured reproductive capacity as Total Reproductive Output (TRO) rather than SSB. TRO is similar to SSB but takes account of higher reproductive output for older fish. The 2026 stock assessment indicated that the SBT TRO in 2026 is at 28% of its initial value and at 99% of the value that could produce maximum sustainable yield. The 2026 assessment indicated the stock has increased from a low of 10% of initial TRO in 2009. A new stock assessment is scheduled for 2029.

A review of indicators in 2026 shows little overall change since the previous review. Age 1 recruitment indices have decreased somewhat in recent years, but recruitment levels are above those experienced from 1980 to the early 2000s. Gene-tagging based estimates of age 2 recruitment have suggested good recruitment in recent years. There are consistent positive trends in the age-based longline CPUE estimates across a number of fleets. The detection rate of parent-offspring pairs from the most recent close-kin mark-recapture data is consistent with an increase in adult abundance.

4. Current Management Measures

Total Allowable Catch (TAC)

The primary conservation measure for management of the southern bluefin tuna stock is the TAC.

At its eighteenth annual meeting in 2011, the CCSBT agreed that a Management Procedure (MP) would be used to guide the setting of the SBT global total allowable catch (TAC) to ensure that the SBT spawning stock biomass achieves the interim rebuilding target of 20% of the initial spawning stock biomass. The CCSBT set TACs until 2020 based on the outcome of that MP. At its twenty sixth annual meeting in

[1] Note: a 2006 review of SBT data indicated that catches over the preceding 10 to 20 years may have been substantially under-reported.

2019, the CCSBT agreed a new MP tuned to achieve a 0.5 probability of achieving 30% of initial TRO by 2035.

In adopting the first MP in 2011, the CCSBT emphasised the need to take a precautionary approach to increase the likelihood of the spawning stock rebuilding in the short term and to provide industry with more stability in the TAC (i.e. to reduce the probability of future TAC decreases). Under the MP adopted, the TACs were set for three-year periods. The TACs for 2018 to 2020 were 17,647 tonnes, the TAC for 2021-2023 was also 17,647 tonnes , and the TAC for 2024 to 2026 is 20,647 tonnes.

The allocations of the TAC to Members of the CCSBT from 2018 to 2026 is summarised below. In addition, some flexibility is provided to Members for limited carry-forward of unfished allocations between quota years.

Current Allocations to Members (tonnes)

	2018-2020[2]	2021-2023[3]	2024-2026[4]
Japan	6,117	6,197.4	7,247
Australia	6,165	6,238.4	7,295
Republic of Korea	1,240.5	1,256.8	1,468
Fishing Entity of Taiwan	1,240.5	1,256.8	1,468
New Zealand	1,088	1,102.5	1,288
Indonesia	1,023	1,122.8	1,336[5]
European Union	11	11	13
South Africa	450	455.3	527

Monitoring, Control and Surveillance

The CCSBT has adopted a Compliance Plan that supports its Strategic Plan and provides a framework for the CCSBT, Members and Cooperating Non-Members to improve compliance, and over time achieve full compliance with CCSBT's conservation and management measures. The Compliance Plan also includes a three-year action plan to address priority compliance risks. The action plan will be reviewed

[2] These figures reflect the voluntary transfers of 21t that Japan provided to Indonesia and 27t that Japan provided to South Africa for the 2018 to 2020 quota block.
[3] These figures reflect: (1) voluntary transfers of 21t that Japan is providing to Indonesia and 27t that Japan is providing to South Africa for the 2021 to 2023 quota block; (2) a voluntary transfer of 7t that Australia is providing to Indonesia for the 2021 to 2023 quota block; and (3) a special temporary allowance of 80t to Indonesia for 2021.
[4] Includes voluntary transfers to Indonesia of 21t from Japan and a special temporary allowance of 130 t. It also includes a voluntary transfer of 27t to South Africa from Japan.
[5] Does not include 91.3t to be repaid by Indonesia every year until 2026 as part of an agreed Payback Plan for a previous overcatch.

and confirmed or updated every year. The action plan is therefore a 'rolling' document and over time its emphasis will change.

The CCSBT has also adopted three Compliance Policy Guidelines, these being:

- Minimum performance requirements to meet CCSBT Obligations;
- Corrective actions policy; and
- MCS information collection and sharing

In addition, the CCSBT has implemented a Quality Assurance Review (QAR) program to provide independent reviews to help Members identify how well their management systems function with respect to their CCSBT obligations, and to provide recommendations on areas where improvement is needed. It is further intended that QARs will:

- Benefit the reviewed Member by giving them confidence in the integrity and robustness of their own monitoring and reporting systems;
- Promote confidence among all Members as to the quality of individual Member's performance reporting; and
- Further demonstrate the credibility and international reputation of the CCSBT as a responsible Regional Fisheries Management Organisation.

Individual MCS measures that have been established by the CCSBT include the following:

Catch Documentation Scheme

The CCSBT Catch Documentation Scheme (CDS) came into effect on 1 January 2010 and replaced the Statistical Document Programme (Trade Information Scheme) which had operated since 1 June 2000. The CDS provides for tracking and validation of legitimate SBT product flow from catch to the point of first sale on domestic or export markets. As part of the CDS, all transhipments, landings of domestic product, exports, imports and re-exports of SBT must be accompanied by the appropriate CCSBT CDS Document(s), which will include a Catch Monitoring Form and possibly a Re-Export/Export After Landing of Domestic Product Form. Similarly, transfers of SBT into and between farms must be documented on either a Farm Stocking Form or a Farm Transfer Form as appropriate. In addition, each whole SBT that is transhipped, landed as domestic product, exported, imported or re-exported must have a uniquely numbered tag attached to it and the tag numbers of all SBT (together with other details) are recorded on a Catch Tagging Form. Copies of all documents issued and received will be provided to the CCSBT Secretariat on a quarterly basis for compiling to an electronic database, analysis, identification of discrepancies, reconciliation and reporting.

Monitoring of SBT Transhipments

The CCSBT program for monitoring transhipments at sea came into effect on 1 April 2009. The program was revised to include requirements for monitoring transhipments in port from 1 January 2015.

Transhipments at sea from tuna longline fishing vessels with freezing capacity (referred to as "LSTLVs") require, amongst other things, carrier vessels that receive SBT transhipments at sea from LSTLVs to be authorised to receive such transhipments and for a CCSBT observer to be on board the carrier vessel during the transhipment. The CCSBT transhipment program is harmonised and operated in conjunction with those of ICCAT and IOTC to avoid duplication of the same measures. ICCAT or IOTC observers on a transhipment vessel that is authorised to receive SBT are deemed to be CCSBT observers provided that the CCSBT standards are met.

Transhipments in port must be to an authorised carrier vessel (container vessels are exempted) at designated foreign ports and, amongst other things, require prior notification to Port State authorities, notification to Flag States, and transmission of the CCSBT transhipment declaration to the Port State, the Flag State and the CCSBT Secretariat.

Port State Measures

The CCSBT adopted a Resolution for a CCSBT Scheme for Minimum Standards for Inspections in Port in October 2015. The Resolution entered into force on 1 January 2017. The scheme applies to foreign fishing vessels, including carrier vessels other than container vessels. Under this scheme, Members wishing to grant access to their ports to foreign fishing vessels shall, amongst other things:

- Designate a point of contact for the purposes of receiving notifications;
- Designate the ports to which foreign fishing vessels may request entry;
- Ensure that it has sufficient capacity to conduct inspections in every designated port;
- Require foreign fishing vessels seeking to use its ports for the purpose of landing and / or transhipment to provide certain required minimum information with at least 72 hours prior notification; and
- Inspect at least 5% of foreign fishing vessel landings in their designated ports each year.

List of Approved Vessels and Farms

The CCSBT has established records for:

- Authorised SBT vessels;
- Authorised SBT carrier vessels; and
- Authorised SBT farms.

Members and Cooperating Non-Members of the CCSBT will not allow the landing or trade etc. of SBT caught by fishing vessels and farms or transhipped to carrier vessels that are not on these lists.

List of Vessels Presumed to have carried out IUU Fishing Activities for SBT

The CCSBT has adopted a Resolution on Establishing a List of Vessels Presumed to have Carried Out Illegal, Unreported and Unregulated Fishing Activities for Southern Bluefin Tuna.

At each annual meeting, the CCSBT identifies those vessels which have engaged in fishing activities for SBT in a manner which has undermined the effectiveness of the Convention and the CCSBT measures in force.

Vessel Monitoring System

The CCSBT Vessel Monitoring System (VMS) came into effect immediately after the Fifteenth Annual Meeting of the Commission, on 17 October 2008. It requires CCSBT Members and Cooperating Non-Members to adopt and implement satellite-linked VMS for vessels fishing for SBT that complies with the IOTC, WCPFC, CCAMLR or ICCAT VMS requirements according to the respective convention area in which the SBT fishing is being conducted. For fishing outside of these areas, the IOTC VMS requirements must be followed.

5. Scientific Advice

At its 2022 meeting, the ESC used the newly adopted MP to calculate a recommended TAC for the period 2024-2026. The recommended TAC is 20,647 tonnes which is an increase of 3,000 tonnes, the maximum allowed under the MP adopted. At its 2023, 2024, and 2025 meetings, the ESC followed its process for examining exceptional circumstances and, finding none, confirmed its advice for the TAC for 2024-2026.

At its 2025 meeting, the ESC used the adopted MP to calculate a recommended TAC for the period 2027-2029. The recommended TAC is 23,647 tonnes which is again an increase of 3,000 tonnes, the maximum allowed under the MP. At its 2026 meeting, the ESC followed its process for examining exceptional circumstances and, finding none, confirmed its advice for the TAC for 2027-2029.

6. Biological State and Trends

The 2026 stock assessment indicated that the SBT TRO is at 28% of its initial level. This is very close (99%) to the level that could produce maximum sustainable yield. The stock is projected to reach the target level of 30% TRO with a probability of 0.7 in the target year, 2035.The next stock assessment will be carried out in 2029.

Exploitation rate: Moderate (Below F_{MSY})

Exploitation state: Overexploited

Abundance level: Low abundance

SOUTHERN BLUEFIN TUNA SUMMARY FROM ESC in 2026 (global stock)	
Reported (2025) Catch	19,488t
Current status relative to initial	
TRO	0.28 (0.21–0.37)
B10+	0.23 (0.17–0.31)
TRO (2026) Relative to TRO_{msy}	0.985 (0.63–1.59)
Maximum Sustainable Yield	32,529t (26,400-39,381)
Current (2026) biomass (B10+)	222,237t (185,188-267,283)
Fishing Mortality (2026) Relative to F_{msy}	0.55 (0.38–0.81)
Current Management Measures	Effective Catch Limit for Members and Cooperating Non-Members: 20,647t per year for the years 2024-2026

TRO is the total reproductive output summed over all age classes weighted by their relative individual contribution to reproduction.

B10+ is the biomass of fish aged 10 years and over.

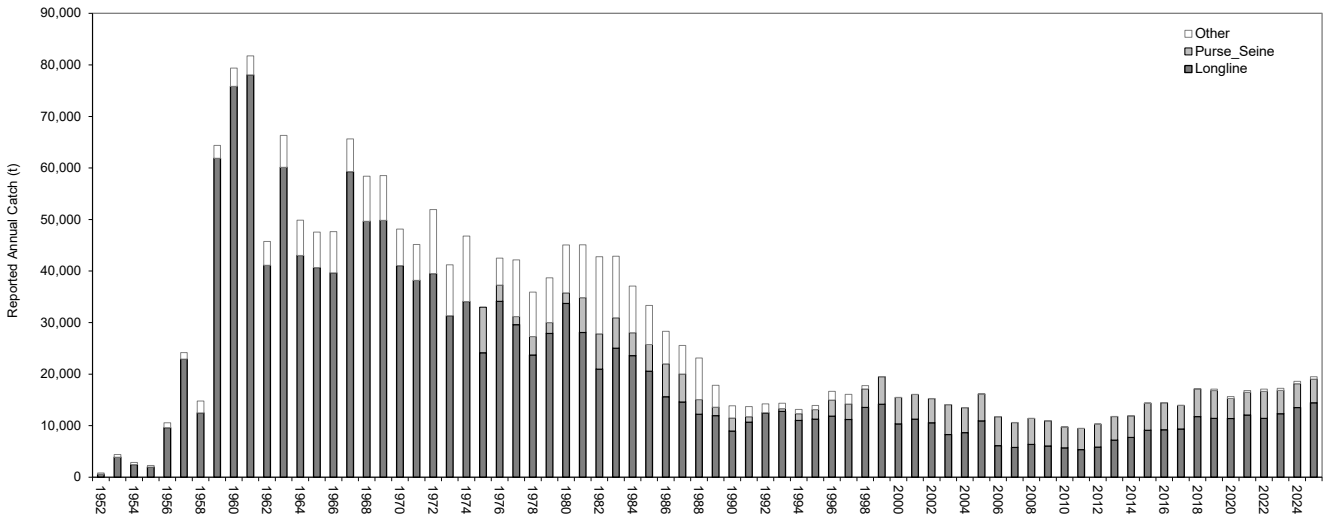

Figure 1: Reported southern bluefin tuna catches by fishing gear, 1952 to 2025. Note: a 2006 review of SBT data indicated that catches over the preceding 10 to 20 years may have been substantially under-reported.

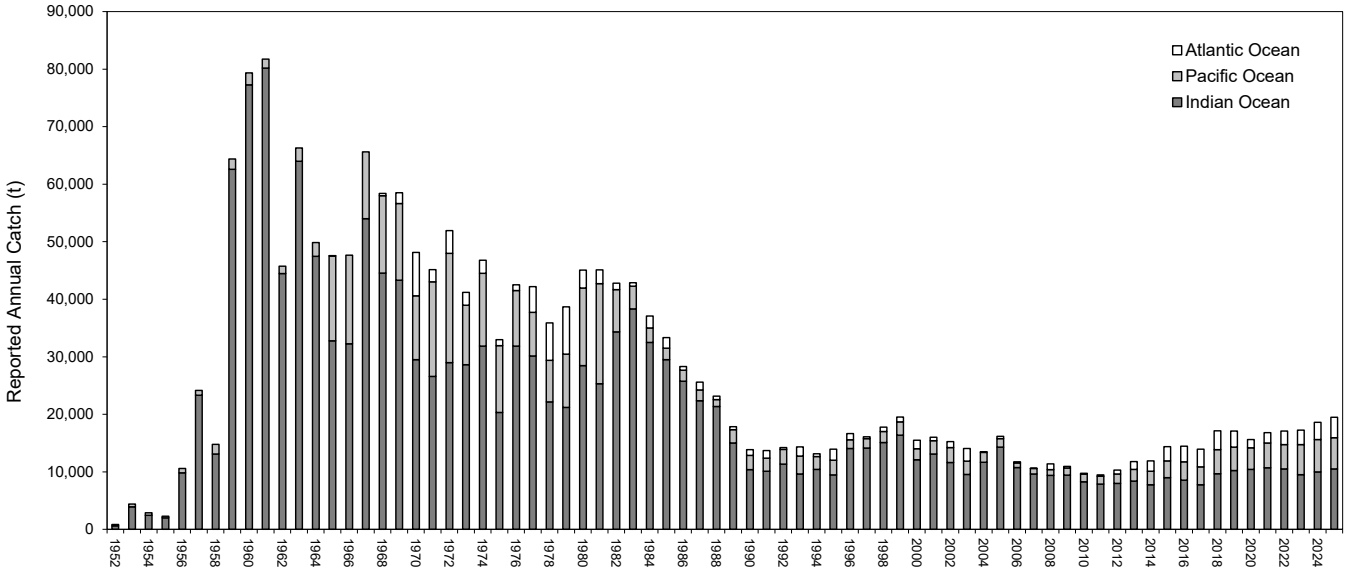

Figure 2: Reported southern bluefin tuna catches by ocean, 1952 to 2025. Note: a 2006 review of SBT data indicated that catches over the preceding 10 to 20 years may have been substantially under-reported.

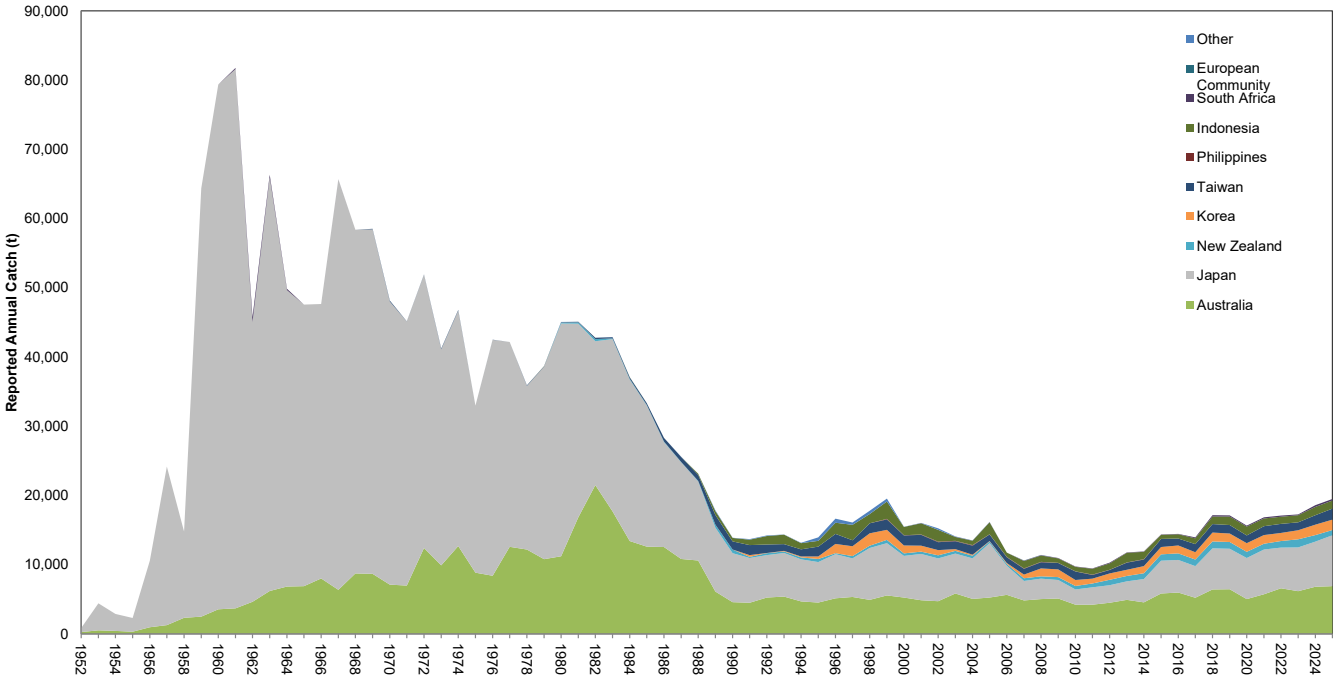

Figure 3: Reported southern bluefin tuna catches by flag, 1952 to 2025. Note: a 2006 review of SBT data indicated that catches over the preceding 10 to 20 years may have been substantially under-reported.

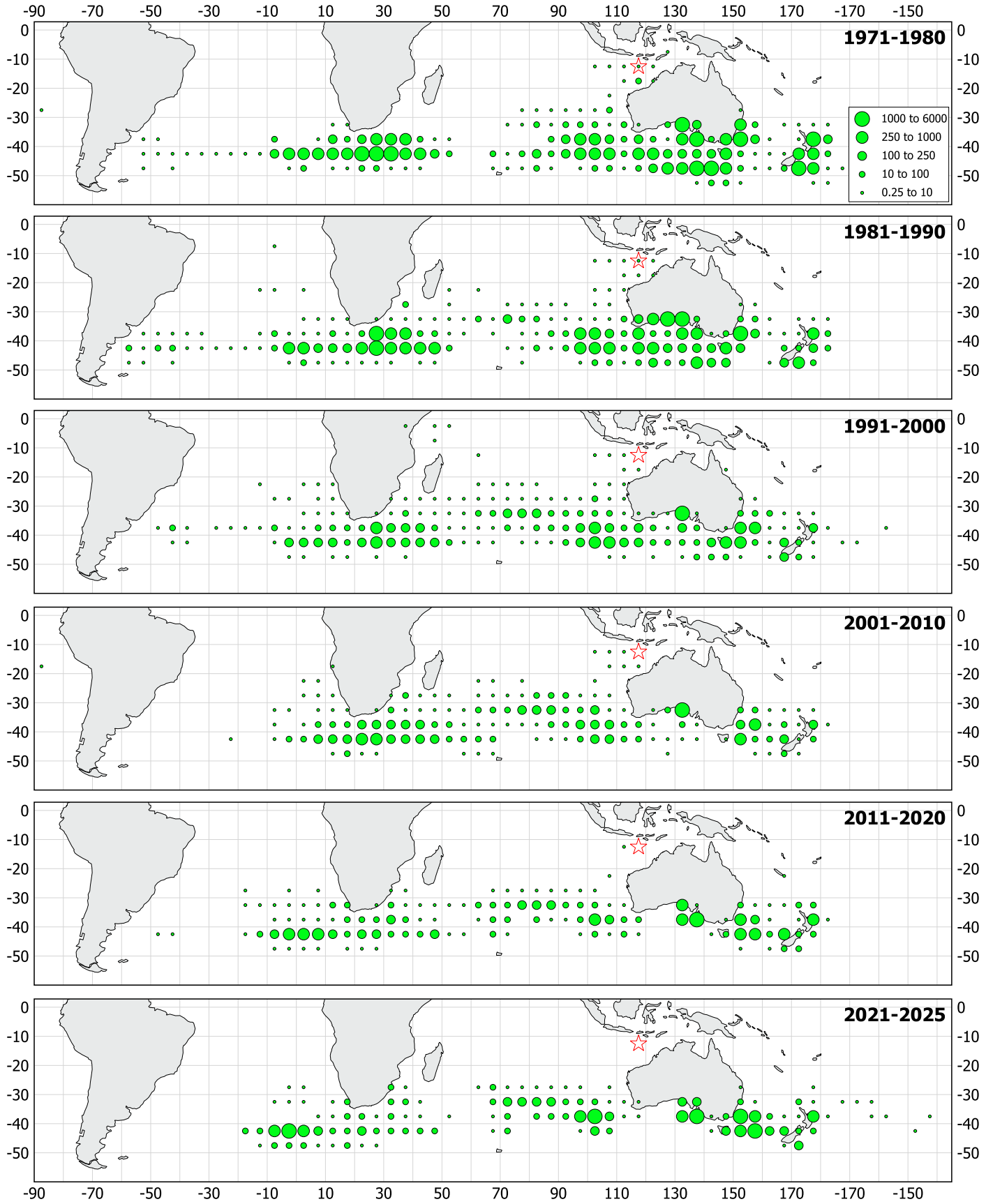

Figure 4: Geographical distribution of average annual reported southern bluefin tuna catches (t) by CCSBT members and cooperating non-members over the periods 1971-1980, 1981-1990, 1991-2000, 2001-2010, 2011-2020 and 2021-2025 per 5° block. The area marked with a star is an area of substantial catch in the breeding ground. Block catches averaging less than 0.25 tons per year are not shown. Note: This figure may be affected by past anomalies in catch.

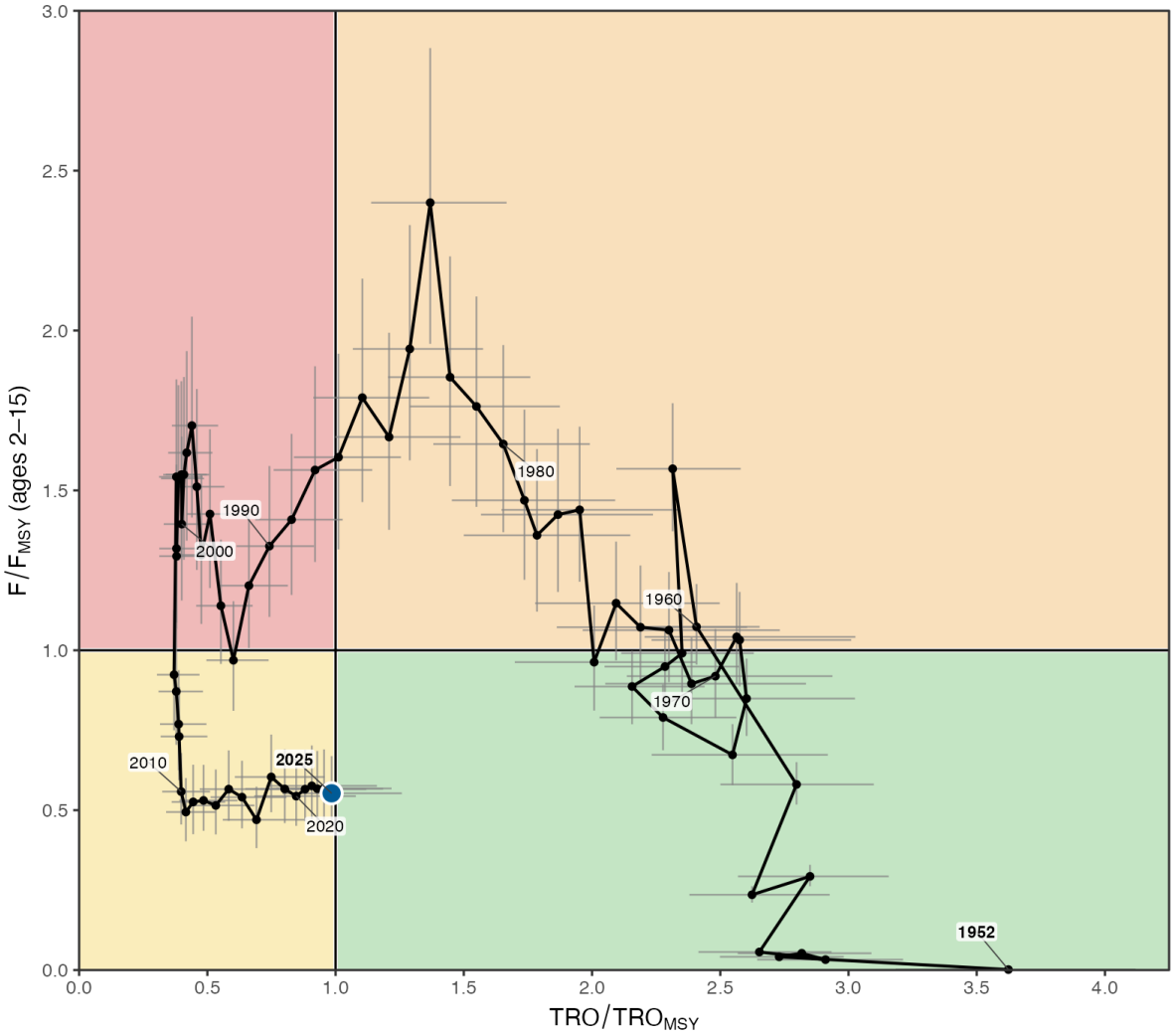

Figure 5. Time trajectory from 1952 to 2025 of median fishing mortality over the F_{MSY} (for ages 2-15) versus Total Reproductive Output (TRO) over TRO_{MSY}. The fishing mortality rates are based on biomass-weighted values and the relative fishery catch composition and mean SBT body weights in each year. Vertical and horizontal lines represent 25th-75th percentiles from the operating model grid.

Attachment 9

Data Exchange Requirements for 2027

Introduction

The data exchange requirements for 2027, including the data that are to be provided and the dates and responsibilities for the data provision, are provided in **Annex A**.

Catch effort and size data should be provided in the identical format as were provided in 2026. If the format of the data provided by a Member is changed, then the new format and some test data in that format should be provided to the Secretariat by 31 January 2027 to allow development of the necessary data loading routines.

Data listed in Attachment A should be provided for the complete 2026 calendar year plus any other year for which the data have changed. If changes to historic data are more than a routine update of the 2025 data or very minor corrections to older data, then the changed data will not be used until discussed at the next ESC meeting (unless there was specific agreement to the contrary). Changes to past data (apart from a routine update of 2025 data) must be accompanied by a detailed description of the changes.

Annex A

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
CCSBT Data CD	Secretariat	31 Jan 27	An update of the data (catch effort, catch at size, raised catch and tag-recapture) on the data CD to incorporate data provided in the 2026 data exchange and any additional data received since that time, including: • Tag/recapture data (*The Secretariat will provide additional updates of the tag-recapture data during 2027 on request from individual members*); • Update the unreported catch estimates using the revised scenario (S1L1) produced at SAG9,
Total catch by Fleet	all Members and Cooperating Non-Members	30 Apr 27	Raised total catch (weight and number) and number of boats fishing by fleet and gear. These data need to be provided for both the calendar year and the quota year.
Recreational catch	all Members and Cooperating Non-Members that have recreational catches	30 Apr 27	Raised total catch (weight and number) of any recreationally caught SBT if data are available. A complete historical time series of recreation catch estimates should be provided (unless this has previously been provided). Where there is uncertainty in the recreational catch estimates, a description or estimate of the uncertainty should be provided.
SBT import statistics	Japan	30 Apr 27	Weight of SBT imported into Japan by country, fresh/frozen and month. These import statistics are used in estimating the catches of non-member countries.
Mortality allowance (RMA and SRP) usage	all Members (& Secretariat)	30 Apr 27	The mortality allowance (kilograms) that was used in the 2026 calendar year. Data is to be separated by RMA and SRP mortality allowance. If possible, data should also be separated by month and location.

[1] The text "**For MP/OM**" means that this data is used for both the Management Procedure and the Operating Model. If only one of these items appears (e.g. **For OM**), then the data is only required for the specified item.

Annex A

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Catch and Effort	all Members (& Secretariat)	23 Apr 27 (New Zealand)[2] 30 Apr 27 (other Members & Secretariat) 31 Jul 27 (Indonesia)	Catch (in numbers and weight) and effort data is to be provided as either shot by shot or as aggregated data (New Zealand provides fine scale shot by shot data which is aggregated and distributed by the Secretariat). The maximum level of aggregation is by year, month, fleet, gear, and 5x5 degree (longline fishery) or 1x1 degree for surface fishery.
Non-retained catches	All Members	30 Apr 27 (all Members except Indonesia) 31 Jul 27 (Indonesia)	The following data concerning non retained catches will be provided by year, month, and 5*5 degree for each fishery: • Number of SBT reported (or observed) as being non-retained; • Raised number of non-retained SBT taking into consideration vessels and periods in which there was no reporting of non-retained SBT; • Estimated size frequency of non-retained SBT after raising; • Details of the fate and/or life status of non-retained fish.
RTMP catch and effort data	Japan	30 Apr 27	The catch and effort data from the real time monitoring program should be provided in the same format as the standard logbook data is provided.
Raised catch data for AU, NZ catches	Australia, Secretariat	30 Apr 27	Aggregated raised catch data should be provided at a similar resolution as the catch and effort data. Japan, Korea and Taiwan do not need to provide anything here because they provide raised catch and effort data. New Zealand does not need to provide anything here because the Secretariat produces New Zealand's raised catch data from the fine scale data provided by New Zealand.
Raised number of hooks data for NZ catches	Secretariat	30 Apr 27	Raised New Zealand number of hooks data, to be provided to NZ only, generated from NZ fine scale data by the Secretariat.
Observer length frequency data	New Zealand	30 Apr 27	Raw observer length frequency data as provided in previous years.

[2] The earlier date specified for New Zealand is so that the Secretariat will be able to process the fine scale New Zealand data in time to provide aggregated and raised data to members by 30 April.

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Raised Length Data	Australia, Taiwan, Japan, New Zealand, Korea	30 Apr 27 (Australia, Taiwan, Japan, Korea) 7 May 27 (New Zealand)[3]	Raised length composition data should be provided[4] at an aggregation of year, month, fleet, gear, and 5x5 degree for longline and 1x1 degree for other fisheries. Data should be provided in the finest possible size classes (1 cm). A template showing the required information is provided in Attachment C of CCSBT-ESC/0609/08.
Raw Length Frequencies	South Africa	30 Apr 27	Raw Length Frequency data from the South African Observer Program.
RTMP Length data	Japan	30 Apr 27	The length data from the real time monitoring program should be provided in the same format as the standard length data.
Indonesian LL SBT age and size composition	Australia Indonesia	30 Apr 27	Estimates of both the age and size composition (in percent) is to be generated for the spawning season July 2025 to June 2026. Length frequency for the 2025 calendar year and age frequency for the 2025 calendar year is also to be provided. Indonesia will provide size composition in length and weight based on the Port-based Tuna Monitoring Program. Australia will provide age composition data according to current data exchange protocols.
Direct ageing data	All Members except the EU	30 Apr 27	Updated direct age estimates (and in some cases revised series due to a need to re-interpret the otoliths) from otolith collections. Data must be provided for at least the 2024 calendar year (see paragraph 95 of the 2003 ESC report). Members will provide more recent data if these are available. The format for each otolith is: Flag, Year, Month, Gear Code, Lat, Long, Location Resolution Code[5], Stat Area, Length, Otolith ID, Age estimate, Age Readability Code[6], Sex Code, Comments. It is planned that the Secretariat will provide the direct age estimates for Indonesia through a contract with CSIRO.
Trolling survey index	Japan	30 Apr 27	Estimates of the different trolling indices (piston-line index (TRP) and grid-type trolling index (TRG)) for the 2026/27 season (ending 2027), including any estimates of uncertainty (e.g. CV).

[3] The additional week provided for New Zealand is because New Zealand requires the raised catch data that the Secretariat is scheduled to provide on 30 April.
[4] The data should be prepared using the agreed CCSBT substitution principles where practicable. It is important that the complete method used for preparing the raised length data be fully documented.
[5] M1=1 minute, D1=1 degree, D5=5 degree.
[6] Scales (0-5) of readability and confidence for otolith sections as defined in the CCSBT age determination manual.

Annex A

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Gene tagging data **For OM and MP**	Secretariat	30 Apr 27	An estimate of juvenile abundance, number of releases and harvest samples, number of matches and CV of the estimate from the gene-tagging study through a contract with CSIRO. The mark-recapture data which includes the tagging release data (e.g. date of tagging, length of fish), tag recapture data (e.g. recapture sample date, length) and whether or not a genetic match with a release tissue was found.
Close Kin Data **For OM and MP**	Secretariat	30 Apr 27	Updated dataset of identified SBT parent-offspring pairs and half-sibling using SNPs. This is a deliverable of the SBT annual close-kin tissue sampling, processing, kin identification and Indonesian ageing project conducted by CSIRO under contract to the CCSBT.
Tag recapture data	All Members	30 Apr 27	Information on recaptured SRP tags that have not been previously reported to the Secretariat
Catch at age data	Australia, Taiwan, Japan, Secretariat	14 May 27	Catch at age (from catch at size) data by fleet, 5*5 degree, and month to be provided by each member for their longline fisheries. The Secretariat will produce the catch at age for New Zealand and Korea using the same routines it uses for the CPUE input data and the catch at age for the MP.
Global SBT catch by flag and by gear	Secretariat	22 May 27	Global SBT catch by flag and gear as provided in recent reports of the Scientific Committee.
Raised catch-at-age for the Australia surface fishery. **For OM**	Australia	24 May 27[7]	These data will be provided for July 2025 to June 2026 in the same format as previously provided.
Raised catch-at-age for Indonesia spawning ground fisheries. **For OM**	Secretariat	24 May 27	These data will be provided for July 2025 to June 2026 in the same format as on the CCSBT Data CD.
Tag return summary data	Secretariat	31 May 27	Updated summary of the number tagged and recaptured per month and season.

[7] The date is set 1 week before 1 June to provide sufficient time for the Secretariat to incorporate these data in the data set it provides for the OM on 1 June.

Type of Data to provide[1]	**Data Provider(s)**	**Due Date**	**Description of data to provide**
Total catch per fishery and sub-fishery each year from 1952 to 2026. **For OM**	Secretariat	31 May 27	The Secretariat will use the various data sets provided above together with previously agreed calculation methods to produce the necessary total catch by fishery and total catch by sub-fishery data required by the Operating Model.
Catch-at-length (2 cm bins) and catch-at-age proportions. **For OM**	Secretariat	31 May 27	The Secretariat will use the various catch at length and catch at age data sets provided above to produce the necessary length and age proportion data required by the operating model (for LL1, LL2, LL3, LL4 – separated by Japan and Indonesia, and the surface fishery). The Secretariat will also provide these catch at length data subdivided by sub fishery (e.g. the fisheries within LL1).
Catch-at-length proportions **For OM**	Secretariat	31 May 27	Japanese length frequencies for fish aged 4 upwards with longline effort for the same strata, used in the CPUE analysis.
Global catch at age	Secretariat	31 May 27	Calculate the total catch-at-age in 2026 according to Attachment 7 of the MPWS4 report except that catch-at-age for Japan in areas 1 & 2 (LL4 and LL3) is to be prepared by fishing season instead of calendar year to better match the inputs to the operating model.
CPUE input data	Secretariat	31 May 27	Catch (number of SBT and number of SBT in each age class from 0-20+ using proportional aging) and effort (sets and hooks) data[8] by year, month, and 5*5 lat/long for use in CPUE analysis.
CPUE series **for OM and MP**	Japan	15 Jun 27 (earlier if possible)	CPUE series based on the standardisation method developed in 2022 using generalised additive model (GAM).
CPUE monitoring and quality assurance series.	Australia, Japan, Taiwan, Korea	15 Jun 27 (earlier if possible)[9]	5 CPUE series are to be provided for ages 4+, as specified below: • Nominal (Australia) • B-Ratio proxy (W0.5)[10] (Japan) • Geostat proxy (W0.8)[10] (Japan) • Taiwan Standardised CPUE (Taiwan) • Korean Standardised CPUE (Korea)

[8] Data restricted to months April to September, SBT statistical areas 4-9, and the Japanese, Australian joint venture and New Zealand joint venture fleets.

[9] When there are no complications, it is possible to calculate the CPUE series less than two weeks after the CPUE input data is provided. Therefore, if there are no complications, Members should attempt to provide the CPUE series earlier than 15 June.

[10] This series is based on the standardisation model by Nishida and Tsuji (1998) using all vessel data. Due to loss of data from Japanese-flagged charter vessels in the New Zealand fishery from 2016 onward, these indices are calculated combining areas 4 and 5, areas 6 and 7, respectively.

Attachment 10

ESC's three-year workplan, including resource requirements

(abbreviations: Sec=Secretariat Staff, Interp=Interpretation, Ch=Independent ESC Chair, P=Independent Advisory Panel, MPCoord=MP Coordinator, CECoord=CPUE Coordinator, C=Consultant, Cat=Catering only, FM=full meeting costs – venue & equipment hire etc., VEH=venue & equipment hire etc., FreeV=Venue & some equipment at no cost, Contracted=CCSBT contract with CSIRO, inf=informal meeting)

	2027	2028 (Indicative only)	2029 (Indicative only)
Regular Meetings			
ESC Meeting	5 days FM: 1Ch, 2P, 1C, 3 Interp, 3 Sec	4 days FM: 1Ch, 2P, 1C, 3 Interp, 3 Sec	4 days FM: 1Ch, 2P, 1C, 3 Interp, 3 Sec
ESC Meeting Chair's report	1Ch	1Ch	1Ch
June/July OMMP Meeting *(no Sec, no Interp)*	5 days Cat: 2P, 1C, 1Ch + 4 Prep Days (3C,1Ch)	5 days Cat: 2P, 1C, 1Ch + 4C Prep Days	5 days Cat: 2P, 1C, 1Ch + 4C Prep Days
Ongoing Essential SRP Projects requiring CCSBT resources			
Gene Tagging	$785,000	$800,000	$815,000
Close-kin sampling, sequencing, and identification	$364,000	$251,000	$231,000
Collection and aging of Indonesian otoliths	$43,000	$45,000	$46,000
Review of MP	Two half-day webinars 3P, 1C	-	-
Capacity Building Initiatives			
South Africa otolith ageing workshop	3-day in-person workshop in South Africa adjacent to ESC 1.5 C 2 prep days	-	-