Report of the 2026 ICCAT Albacore Data Preparatory Meeting
(Hybrid, April 13 to 17, 2026 Pasaia, Spain)

The results, conclusions and recommendations contained in this Report only reflect the view of the Albacore Species Group. Therefore, these should be considered preliminary until the Standing Committee on Research and Statistics (SCRS) adopts them at its annual Plenary meeting and the Commission revise them at its annual meeting. Accordingly, ICCAT reserves the right to comment, object and endorse this Report, until it is finally adopted by the Commission.

1. Opening, adoption of agenda and meeting arrangements

The meeting was held from 13 to 17 April 2026 in hybrid format in Pasaia, Spain. The meeting Chairs, Haritz Arrizabalaga (EU-Spain) and Bruno L. Mourato (Brazil), opened the meeting. The ICCAT Executive Secretary welcomed and thanked the participants. The Chairs proceeded to review the agenda, which was adopted without changes (**Appendix 1**).

The list of participants is included in **Appendix 2.** The list of SCRS documents and presentations provided at the meeting is attached as **Appendix 3**. The abstracts of all SCRS documents and presentations provided at the meeting are included in **Appendix 4**. The following served as rapporteurs:

Sections	***Rapporteur***
Items 1, 11	M. Ortiz
Item 2	P. Quelle, B. Mourato, H. Arrizabalaga, A. Urtizberea
Item 3	B. Deprez, J. García
Item 4	W. West, N-J Su, I. Carmona, S. Jiménez, M. Ortiz
Item 5.	E. Kikuchi, B. Mourato
Item 6.	B. Mourato
Item 7.	G. Merino
Item 8.	B. Mourato, J. Ortiz de Urbina, H. Arrizabalaga
Item 9.	B. Mourato, and H. Arrizabalaga
Item 10.	B. Mourato, H. Arrizabalaga and M. Neves dos Santos

2. Review of historical and new information on biology

Document SCRS/2026/032 presented the use of the bomb 14C chronology to test the validity of age estimates for North Atlantic albacore tuna (*Thunnus alalunga*). An investigation of daily increments and early length modes - coupled with information from the 14C offsets and otolith mass growth - led to refined age-at-length estimates and an 18-year lifespan supported by bomb 14C dating. A limited number of otoliths were available, but the combined specimens provided an opportunity to derive age and growth parameters.

The Group noted uncertainties in the interpretation of the 14C signal, particularly for young of the year (YOY) individuals, potentially linked to oceanographic variability, early-life movement, and spatial differences in baseline values. The limited representativeness of the sampling design, restricted to the eastern Atlantic for YOY, was also highlighted. The Group recommended improving sampling, particularly for juveniles, and making further use of existing otolith collections.

Presentation SCRS/P/2026/034 provided a comparative analysis of the counts of growth marks in otoliths and dorsal spines for *T. alalunga*. It revealed a significant difference in growth marks between the two calcified structures, otoliths presenting an average positive difference of 2.4 ±1.8 marks. Applying a correction of +2 marks to the spine readings gave similar parameters of the von Bertalanffy growth function between otoliths and spines. It confirmed a possible bias when estimating growth using spines.

The Group highlighted limitations in the availability of samples from all areas, particularly the absence of small individuals, which restricts the interpretation of early growth. The Group suggested further work incorporating juvenile samples and agreed not to use the preliminary otolith-based growth parameters for the southern albacore stock. The potential use of age–length data in assessment models was discussed, however the comparison was based on band counts rather than validated ages, although the age-length data could still be explored.

Presentation SCRS/P/2026/037 provided an overview of some biological aspects of albacore in the Mediterranean Sea, with a focus on Egyptian waters. The study assessed growth parameters and age characterization based on length-frequency data collected during 2024–2025. Preliminary information on sex ratio and maturity stages was also provided.

The Group encouraged continuation of this work, noting its relevance for addressing data gaps in the eastern Mediterranean. It was noted that analyses were based on length-frequency methods (e.g. Electronic Length Frequency Analysis (ELEFAN) in R), whereas ICCAT Recommendations indicate that age and growth estimates should preferably be supported by hard-part readings (spines, vertebrae, otoliths).

The Group also supported ongoing efforts to compile and update Mediterranean growth studies. The use of standardized methodologies for maturity analysis and interpretation of reproductive status across the stock was recommended to ensure comparability.

Challenges in independent sample collection were highlighted. The author requested specific support for these activities in the near future from ICCAT. The Group supported strengthening sampling efforts and regional scientific contributions on albacore in the Mediterranean Sea.

Document SCRS/2026/079 reported the additional preliminary results on the continuation of the work regarding the 2025 short-term contract on the North Atlantic albacore tuna reproductive biology study: Biological samples collection and analysis, which shall be concluded during 2026.

2.1 Growth

The ICCAT Manual for albacore was reviewed. The parameters from Lee and Yeh were evaluated by the Group and following a revision of size data in Task 2 of the ICCAT database, the Group noted that observations around or exceeding the estimated asymptotic size (L_∞) in those studies were very limited. Therefore, these parameters were not retained for the assessment.

Due to uncertainties in growth parameters, an analysis to characterize this variability was conducted during the meeting (SCRS/2026/078). Growth parameter estimates from Atlantic and other stocks were incorporated into a Monte Carlo approach using a von Bertalanffy growth model. Two approaches were explored: one based on independent variability in parameters, and another based on curves located at selected percentiles (25th, 50th and 75th).

The Group compared both approaches and discussed whether uncertainty should be represented through parameter variability or through percentile-based curves. The parameter-based approach was considered statistically robust and able to capture overall variability, including the studies used in previous assessments. However, the Group noted that combining parameters independently may result in biologically implausible configurations and convergence issues in assessment models, particularly when combined with other parameters such as natural mortality.

As a result, the Group supported the use of growth curves located at specific percentiles, and a configuration for the models was considered using a von Bertalanffy growth model parameters at median values and variability represented by the 25th and 75th percentiles.

The Group noted that most biological parameters input data were originated from the northern stock. The limited biological information available for the southern stock was emphasized, highlighting the importance of ongoing scientific research efforts.

The Group recommended providing general guidance to modelers while allowing flexibility to explore feasible model configurations.

2.2 Maturity

The ICCAT Manual identifies Bard (1981) as the source of maturity estimates for the Atlantic albacore stocks. However, the Group noted that the samples used in Bard (1981) research study came from the northern stock. The Group reviewed the preliminary maturity studies presented as part of the Atlantic Albacore tuna Year Programme (ALBYP) in 2024 and 2025, which estimated L_{50} values of 89.7 cm and 94.9 cm for the South Atlantic albacore, respectively (Travassos *et al*., 2025).

Given the preliminary status of South Atlantic maturity studies, the Group agreed to use the maturity parameters applied in the northern stock (Bard, 1981; L_{50} = 90 cm) as the base case for the assessment, and to incorporate values from recent ALBYP studies as sensitivity analyses.

2.3 Maximum age

Recent studies by See *et al.* (SCRS/2026/032) and Chevrier *et al*. (2026) have estimated ages of up to 18 years for albacore tuna, with at least one estimate validated using bomb 14C. Despite these findings, the Group decided to retain the maximum age of 15 years used in previous assessments until further clarification.

2.4 Natural mortality (M)

Age-specific natural mortality will be modelled assuming a Lorenzen function to account for decreasing mortality with increased fish size (Lorenzen *et al*., 2022).

The Group had discussions regarding the treatment of natural mortality in the assessment. The key steps in determining the values of M to be considered in the reference case assessment model, and a summary of key Group discussions, are provided in **Table 1.**

Furthermore, the Group felt that it was important to include uncertainty in M-at-age in the assessment. It was decided that this should be done based on alternative values of the average natural mortality of adult albacore from the predictive model of Hamel and Cope (2022). This was considered as a preferred approach compared to the 2020 Atlantic Albacore Stock Assessment Meeting (Anon., 2020).

Hamel and Cope (2022) recommended the use of a standard deviation in the log-space of 0.31 when considering uncertainty in average M. This was based on an assumption that uncertainty in the relationship between A_{MAX} and M was split equally between estimation error and true variation in the relationship between A_{MAX} and M. The Group noted that alternative assumptions regarding the uncertainty were possible, but that there was no strong basis to consider another approach.

The next decision was to determine the alternative values of average adult M to be used and how to weigh them when combining the model results. The Group agreed to consider a range of plausible values, subject to selection by model performance and diagnostics, based on the 25th, 50th and 75th quantiles of the lognormal probability distribution (**Table 2 and Figure 1**).

The weighting for the different values of average M was calculated from the relative density function from the lognormal distribution. The Group noted that, because a lognormal distribution was being used, the lower value was closer to the median and had a higher weight compared to the higher value, which was further from the median, but with lower weight. The two alternative sets of M values and weights are provided below. A comparison of model diagnostics across the five alternative assumptions is desirable, however the uncertainty grid should incorporate the median (0.36) and one set of intervals (25th or 75th percentiles), at a minimum. The overall derived Lorenzen mortality-at-age assumptions for the median and 50th percentile interval is shown in **Figure 1**.

A review of historical biological information was conducted. In **Table 3** are compiled the biological parameters for the South Atlantic albacore stock (ALB-S). The Group noted that certain values from the ICCAT Manual may require revision and agreed to request the ICCAT Secretariat to verify and potentially amend them.

3. Review of fishery statistics/indicators

The ICCAT Secretariat provided a presentation (SCRS/P/2026/031) with an overview of the available statistical data for albacore across the North Atlantic, South Atlantic and Mediterranean stocks, with particular attention to Task 1 nominal catches (T1NC), Task 2 catch and effort (T2CE), size data (both Task 2 size samples frequencies (T2SZ), and Task 2 catch-at-size (T2CS)), as reflected in the Albacore SCRS catalogues (Task 2 showing the data availability).

The ICCAT Secretariat also provided presentation SCRS/P/2026/033, with a proposal to subdivide the Mediterranean (MED) Albacore sampling area (AL35) into four smaller new sampling areas.

Presentation SCRS/P/2026/032 provided an updated summary of albacore conventional and electronic tagging data at the ICCAT Secretariat.

Document SCRS/2026/066 describing an analysis of size structure of albacore from longline fisheries in Algeria was presented. Results indicated an allometric growth higher than the ICCAT Mediterranean reference.

3.1 Task nominal catches (T1NC)

The ICCAT Secretariat presented an overview of nominal catches (T1NC) of albacore (SCRS/P/2026/031), noting that total catches of the three stocks (ALB-N, ALB-S, and ALB-MD) peaked between the 1960s and 1990s and have since declined and stabilized at lower levels, with very limited data currently available for 2025. Catches in recent years are predominantly from the North and South Atlantic stocks, while the Mediterranean stock represents a relatively small proportion of the total catches in T1NC (generally below 5%). All datasets were made available on the meeting's NextCloud folder, and a short presentation of the different dashboards was provided, including the difference between the blue (updated yearly) and the red (updated daily) version of each dashboard, and noting the need for caution when using partial data from the red dashboards.

In terms of fishing activity, longline (LL) remains the primary gear, followed by baitboat (BB) and other surface gears, with catches largely concentrated in temperate areas, consistent with the species' distribution. The Secretariat also highlighted a significant reduction in catches reported under unclassified gears since 2017, reflecting improvements in reporting practices, and noted that a substantial share of total catches is accounted for by a limited number of fleets, notably Chinese Taipei and EU-Spain.

The total T1NC catch series of ALB-S stock are presented in **Table 4** (**Figure 2** and **Figure 3** show the cumulative yearly catches by sampling area and major gear). The CATDIS maps (spatial catch distribution by decade) are presented in **Figure 4**.

Based on the standard ALB-S SCRS catalogue (**Table 5**) for the last thirty years (1996-2025), no major gaps in Task 1 nominal catches data for the main flag/gear combinations were highlighted. The overall score of 6.24 places the southern stock slightly lower than the northern stock (with a score of 7.15).

Although the focus of the meeting was on southern stock, the situation of the ALB-M stock was briefly discussed, due to the historical lower level of data quality (the score of ALB-M being 2.88). Historical data gaps are dragging down the score, as when considering only the last 10 years, the score becomes 5.93, indicating an improvement in recent years on the availability of Task 2 data. The Group noted on the possible misidentification of certain flag/gear combinations catches (e.g. the Italian purse seine fleet catches of albacore between 2003 and 2011 of over 10,000 tons) that require further clarification.

Presentation SCRS/P/2026/033 provided by the ICCAT Secretariat proposed to subdivide the Mediterranean (MED) Albacore sampling area (AL35) into four new sampling areas (**Figure 5**), with the objective of replacing the former Task 1 areas and improving the spatial consistency and usefulness of statistical information in the Mediterranean Sea.

The ICCAT Secretariat reminded the Group that the proposed delimitation is based on 5° longitude increments, consistent with the current minimum spatial resolution reported in ICCAT datasets (5°×5°), particularly for forms ST03-T2CE (catch and effort), ST04-T2SZ size sampling, and ST05-T2CS catch-at-size estimations. A finer spatial resolution (e.g., 1°×1°) would be too detailed compared to the standard reporting resolution for longline fisheries (5°×5°) and could compromise the consistency of historical data classification.

The ICCAT Secretariat presented a map viewer focusing on the Mediterranean, displaying 5°x5° and 1°x1° grids, sampling areas and the divisions defined by the Food and Agriculture Organization (FAO) and the General Fisheries Commission for the Mediterranean (GFCM) to support the decision-making process.

The Group recognized that the subdivision into four areas represents a significant improvement compared to the current situation, as it provides explicit geographical boundaries instead of historically named areas without a clear spatial definition. It was highlighted that the main objective of the proposal is to enhance the quality and utility of statistics for the main ICCAT fisheries in the Mediterranean.

The Group noted that, regarding the boundary between the western and central Mediterranean, areas such as Sardinia, Sicily, and the eastern Ligurian Sea may be more consistent with the central Mediterranean in ecological terms, whereas areas such as the Gulf of Lion and the Balearic Islands are more aligned with the western component.

The ICCAT Secretariat commented that this proposal had already been presented in the last Intersessional Meeting of the Subcommittee on Statistics (SC-STATS) (24-25 February 2026) (Anon., in press) and at the Swordfish Data Preparatory Meeting (23-27 March 2026) (Anon., in press) (SCRS/P/2026/025). During this meeting, it was suggested that several specific points might require further refinement, including the delimitation at the Strait of Gibraltar and the western Alboran Sea, in order to avoid the artificial allocation of Mediterranean catches to the Atlantic Ocean.

3.2 Task 2 catch and effort (T2CE)

The ICCAT Secretariat presentation SCRS/P/2026/031 also provided an overview of the available Task 2 catch and effort (T2CE) data for albacore, noting that these datasets constitute a key input for deriving spatial and temporal distributions of fishing activity, including their use in products such as catch distribution (CATDIS) and effort distribution (EFFDIS).

The ICCAT Secretariat highlighted that, while T2CE data are broadly available, important limitations remain, particularly regarding the recovery of data at the monthly level and the smaller spatial grids (1°x1° and 5°x5° for longline) to replace existing datasets with higher resolution (by year/quarter and using highly aggregated geographical grids such as 5°x10°, 10°x10° and 10°x20°). This limitation may constrain the use of those highly aggregated datasets with direct application in assessment studies and other derived products (CATDIS and EFFDIS). During the current decade, no T2CE data reported at a yearly or quarterly level or with a spatial resolution exceeding 5°×5° have been submitted, which is encouraging and reflects the decision of the SCRS in adopting this measure in the 2000s.

Based on the standard ALB-S SCRS catalogue (**Table 5**) for the latest thirty years (1996-2025), some T2CE datasets are still missing for the main flag/gear combinations (baitboat: Namibia, EU-Portugal, Brazil; longline: Namibia, EU-España, Saint Vincent and the Grenadines). Thus, the ICCAT Secretariat reminded the CPC participants to use the two albacore instruments available (SCRS catalogues and the detailed T2CE catalogue), as recommended by the SCRS, to verify their completeness and report the missing information to ICCAT.

3.3 Task 2 size data. Task 2 Size samples (T2SZ) and Task 2 Catch-at-size (T2CS)

The ICCAT Secretariat presentation SCRS/P/2026/031 also provided an overview of the available size data for albacore, including Task 2 size samples (T2SZ) and catch-at-size data (T2CS), noting that these datasets are available over an extended historical period and can be identified in the SCRS catalogue and related tools.

The ICCAT Secretariat indicated that, while T2SZ data are generally reported, important gaps and inconsistencies remain across stocks and time periods, affecting their completeness and representativeness. It was also recalled that the provision of T2CS data is optional since 2023, which results in more limited availability compared to T2SZ, and may constrain their use in certain analytical applications. By looking at the standard ALB-S SCRS catalogue (**Table 5**) for the last thirty years (1996-2025), some T2SZ datasets are still missing for the main flag/gear combinations (baitboat: South Africa, Namibia, EU-Portugal, Brazil; longline: Japan, Brazil, Namibia, EU-España, Saint Vincent and the Grenadines).

Document SCRS/2026/066 was provided an analysis of the size structure of albacore tuna caught by the longline fisheries of Algeria. The study analyzed the size composition of catches based on a sample of 64 albacore tuna collected in 2025 along the central and eastern Algerian coasts from longline fisheries. At the conclusion of the presentation, the author expressed his intention to continue contributing to this line of work in the future.

3.4 Tagging data

The ICCAT Secretariat presented document SCRS/P/2026/032, which provided a summary of albacore conventional and electronic tagging, reflecting the most recent updates provided to ICCAT.

The conventional tagging dataset contains 21,037 tag releases and 723 tag recovers. **Table 6** shows releases and recoveries per year, and **Table 7** shows the number of recoveries grouped by number of years at liberty. Three additional figures displayed the geographical distribution of albacore conventional tagging available in ICCAT: the density of releases in 5x5 squares (**Figure 6**), the density of recoveries in 5x5 squares (**Figure 7**), and the albacore apparent movement (arrows from release to recovery locations) (**Figure 8**).

Regarding electronic tagging, a total of 271 deployed tags and 73 data transmissions were reported. The ICCAT Secretariat presented tables of releases and recoveries by year, distinguishing between internal tags (225 releases and 35 recoveries, highlighting that in 2025, 21 tags were recovered) and satellite tags (46 releases and 38 tags that popped up and transmitted data to the satellite).

The ICCAT Secretariat also commented on the number of tags available for deployment (24 miniPAT from Wildlife Computers and 1 archival internal tag), stressing that some of the miniPATs are from the 24P series and should be deployed as soon as possible to avoid battery-related issues.

Additionally, two albacore dashboards were prepared to examine dynamically and interactively the tagging data. The dashboards for the conventional tagging (CTAG) and electronics tags (ETAG) metadata are published on the ICCAT website.

4. Review of available indices of relative abundance by fleet

4.1 Southern stock Catch Per Unit Effort (CPUEs)

Document SCRS/2026/062 presented the standardization of the Catch Per Unit Effort (CPUE) for South Atlantic albacore (*T. alalunga*) from the Brazilian (1978–2024) and Uruguayan (1992–2011) longline fisheries, covering a combined period of 1978–2024. The standardized CPUE series indicates relatively high catch rates during the mid-1990s, followed by a decline in the early 2000s, a period of relative stability through the mid-2000s and early 2010s, and lower values in recent years.

The Group requested information on how cluster analysis used in the delta-generalized linear model (delta-GLM) CPUE standardization were defined. The authors clarified that the clusters were based on catch species composition. The authors clarified the historical targeting strategies, noting that albacore was not a primary target in the Brazilian fishery. The involvement of chartered vessels from Japan and Chinese Taipei had shifted fishing effort toward actively targeting albacore. The Uruguayan longline fleet showed a similar pattern, initially targeting albacore before part of the fleet transitioned to swordfish and sharks.

The Group requested details on the abundance trend estimation and the authors explained that 'year-quarter' was incorporated as a variable in the model, and the year effect was derived using the 'lsmeans' method. This approach is consistent with our previous analysis conducted via the *cpue.rfmo* R package.

The Group requested clarification on the differences between the two fleets. The authors noted that in the southern area, where both fleets overlap, the Brazilian and Uruguayan longline vessels operate in similar fishing grounds and target similar species.

To account for these dynamics, fleet-related differences in catchability were addressed through the inclusion of vessel ID and spatio-temporal effects in the model, which were considered to adequately capture variability in catchability over time. The Group recommended that this standardized CPUE for the period 1978-2024 be used as input data for the south Atlantic albacore assessment.

Document SCRS/2026/065 presented the standardization of CPUE for South Atlantic albacore (*T. alalunga*) for the Chinese Taipei distant-water tuna longline fishery in the South Atlantic Ocean using a generalized linear model. Three periods were considered in the analysis, i) whole period, 1967-2025, ii) 1981-2025 (with cluster analysis to inform targeting), and iii) 1998-2025 with number of hooks between floats (HBF) to address the issue of historical changes in targeting. Standardized CPUE of albacore developed for the 1981-2025 and 1998-2025 periods showed almost identical trends to those derived from the model of the whole period.

The Group noted that there are three series available from various models and requested suggestions on which series could be used for the assessment. The authors replied that only one index was available for the early period starting from 1967. This index could be used alongside the 1981-2025 index, which includes targeting information from cluster analysis. The Group requested available information regarding the early period. The authors replied that this period marked the beginning of the fishery, and data remained quite limited, especially for the initial three years in the 1960s. However, from 1970 to 1990, the fishery remained consistent in targeting albacore tuna as primary species. The Group noted that the coefficient of variation (CV) is quite high, particularly for 1967. The authors explained that this is due to the limited data available during the initial fishery period. The Group requested re-run CPUE standardization model using only the data from 1970 to 1980 which was done during the meeting. The Group agreed to use two time periods, 1970-1980 (early period 1967 to 1969 excluded) and 1981-2025 (including cluster analysis).

Document SCRS/2026/069 presented the first standardization of CPUE for South Atlantic albacore (*T. alalunga*) from the Namibian pelagic longline fishery, over the period 2004-2024. A Generalized Additive Model (GAM) with a delta-lognormal distributed error was applied to account for zero-inflated and positively skewed catch data. Explanatory variables included year, month, fishing area (Exclusive Economic Zone, EEZ), and spatial smoothers of latitude and longitude. The resulting index showed a long period of low abundance through 2015-2018, followed by a sharp increase in 2020-2021 and a decline thereafter.

The Group inquired whether albacore tuna was the target species for the fishery, and the authors confirmed that it was. The Group also noted that the nominal CPUE dropped nearly to zero, particularly starting in 2017, followed by a sharp increase since 2020. The Group questioned whether any operational changes had occurred in the fishery and whether a cluster analysis had been conducted. The authors replied that no significant changes took place between 2017 and 2020; however, they will collect further information to identify potential shifts and improve the model and indicated that they would consider conducting a cluster analysis. The authors updated the information on the standardized CPUE.

The Group noted that model diagnostics were generally acceptable, but several issues were identified during the Group discussion, such as the substantial increase in biomass in recent years that appear biologically implausible. Further refinement of the methodology is required. The authors committed to revisiting the model, exploring adjustments and improving the robustness of the index for the next assessment. The authors also committed to exploring a standardized CPUE index for their baitboat fishery. The Group agreed to exclude this standardized CPUE index from the current albacore stock assessment.

Document SCRS/2026/071 presented the standardization of CPUE for South Atlantic albacore for the South African baitboat fishery, for the period 2003-2024. A Tweedie generalized additive mixed model (GAMM) was used to account for zero inflation in the catch data. The analyses indicate that the CPUE for the South African baitboat fishery for albacore has been stable over the last two decades. The author presented the length frequency distribution of the baitboat fleet, highlighting the high proportion of juvenile and sub-adult (<90 cm FL) albacore in the catch.

The Group inquired whether the fishery targets albacore. Authors clarified that this baitboat fishery targets specifically albacore and yellowfin tunas are caught opportunistically. The Group requested any available information regarding different fishing tactics or strategies used in the fishery. Catch records for the rod-and-reel fishery are available from logbooks. While this applies to yellowfin tuna, albacore tunas are caught using the pole-and-line method. Differences in fishing gear are accounted for in the model through the clustering analysis. The author further noted that, although ongoing studies are investigating stock connectivity and mixing between the Atlantic and Indian Oceans, it is considered likely that catches from this fleet originate predominantly from the Atlantic stock.

The Group asked whether it was possible to incorporate environmental variables into the standardization models, as these may influence the abundance index trend. The authors replied that factors such as temperature, upwelling, and thermocline are environmentally significant for albacore tuna. However, incorporating these environmental drivers into the analysis to account for local availability was considered challenging. The Group recommended that the standardized CPUE series for the period 2003–2024 be used as input to the South Atlantic albacore stock assessment.

Document SCRS/2026/072 presented the standardization of CPUE for South Atlantic albacore (*T. alalunga*) caught by the Japanese longline fishery over the period 1979–2025. Methodological improvements relative to previous studies included the use of un-aggregated data, incorporation of spatial and spatio-temporal random effects implemented via sdmTMB software, inclusion of vessel effects, and a spline term for hooks between floats. The standardized CPUE was successfully estimated, and model diagnostics indicated improved residual behaviour and an adequate representation of spatial dependence. The earlier period (1975–1978), included in previous analyses, was excluded due to the absence of vessel ID information.

The CPUE series showed substantial variability beginning in 2008, with an overall increasing trend that is likely attributable to changes in targeting practices and catchability. The Group expressed concern that these shifts in targeting may not have been fully accounted for in the standardization process.

The authors indicated that the fishing vessels operated across both the South Atlantic and southern bluefin tuna fishing grounds and their fishing strategies may have shifted around 2008. The authors stated that accounting for this shift in target will require further analysis and cannot be done before this stock assessment but will be explored for future assessments.

During the meeting the authors presented updated results for three scenarios to try to account for the effects of changes in targeting: (1) excluding data from 2008 and rerunning the model; (2) excluding data from areas South of 35ºS where the fishery targeted southern bluefin tuna; and (3) removing data after 2007 due to shifts in targeting and catchability.

Following discussion of several options, the Group agreed to include the index for the period up to 2007. The Group recommended that this standardized CPUE for the period 1979-2007 be used as input data for this South Atlantic albacore assessment. The review and evaluation summary of the available indices of abundance for the south Atlantic albacore is provided in **Table 8** while **Table 9** provides the index values and the corresponding variance associated (**Figure 9**).

The Group suggested conducting a correlation analysis of the available standardized abundance indices (CPUE) series for the South Atlantic albacore. This analysis was performed during the meeting using the *pairs.panels* function from the R *psych* package. The data consist of the CPUE series compiled in **Table 9**.

Below the diagonal (**Figure 10**), the lower panel displays scatter plots comparing pairs of variables. Each point represents an observation (in this case, a CPUE value from the dataset). These plots enable visual inspection of relationships between variables, including potential linear or non-linear trends, clusters, and outliers.

Above the diagonal, the upper panel displays the Pearson correlation coefficients for each pair of variables. These values quantify the strength and direction of the linear relationship between variables, ranging from -1 (perfect negative correlation) to +1 (perfect positive correlation), with values near 0 indicating a weak or no linear relationship.

Note that the correlation of -1 between JPNLL2 and CTPLL1 is not considered meaningful, as it is based on only two overlapping years of data and is therefore uninformative. Similarly, the observed correlation between JPNLL and NAMLL (0.89) should be interpreted with caution, given the very small sample size (n = 4); this limitation also applies to other pairs in the analysis with similarly few observations. In addition, some variable pairs show NA values in the correlation matrix because they do not share overlapping years, making correlation estimates impossible. It is also important to note that a low correlation does not necessarily imply the absence of a relationship, as associations may be non-linear. Among the more reliable results, the strongest relationships are observed between CTPLL2 and NAMLL (0.64) and between BRA-URYLL and ZAF-BB (0.40), both indicating positive associations.

After the review of the correlation analysis the Group did not find any particular cluster or groups of indices that represent alternative states of nature for the southern albacore stock.

For the South albacore stock, the Group agreed to include the following indices in the upcoming stock assessment session: Brazil and Uruguay longline (1978-2024), two time periods for Chinese Taipei longline (1970-1980, 1981-2025), South Africa baitboat (2003-2024) and Japan longline (1979-2007). The early period of the Japan longline index (1959-1969) will be included as a sensitivity run.

4.2 Northern stock CPUEs

The CPUE indices accepted in the 2023 albacore stock assessment (Anon., 2023) have been updated and were presented to the Group for evaluation. The Chair noted that these four CPUEs constitute a strict update as they will be used for the North Atlantic albacore Management Strategy Evaluation (MSE) management procedure (MP) application and the Exceptional Circumstances evaluation (**Table 10**).

A standardized CPUE index for North Atlantic albacore based on the EU-Spain baitboat fleet was presented as document SCRS/2026/037. Data collected between 1981 and 2025 were used for its development. The index was derived using a Generalized Linear Mixed Model (GLMM) with log-normal error distribution, incorporating year-month and year-zone interactions as random effects. No differences were found compared with the index presented in the previous year, and the Group had no comments.

Catch and effort data of albacore tuna standardized for the Chinese Taipei tuna longline fishery in the North Atlantic Ocean using a GLM was provided as document SCRS/2026/064.

Regionally based abundance indices of albacore separated at 30°N were developed using data from recent years, as well as an index for the whole North Atlantic to be used in the MP. The Group agreed to use the updated global index for iterating the MP.

A strict update of the Japanese longline CPUE for North Atlantic Albacore was provided as document SCRS/2026/073. To estimate the updated standardized CPUE, logbook data from 1975 to 2025 were used, applying the same statistical methodology as in the previous CPUE submission. The calculated CPUE shows a relatively high trend over the most recent three years (2023–2025) compared with the past ten years (2016–2025).

The US longline standardized index for albacore was also updated to 2025 for the MP, replicating the prior methods for a strict update in document SCRS/2026/075.

No comments were made by the Group on these indices.

4.3 Mediterranean stock

Document SCRS/2026/068 provided an analysis of correlations between Mediterranean albacore tuna catch rates (2024-2025) in the Gulf of Hammamet (Tunisia) and environmental variables using GAMs and spatial distribution models. Variability in CPUE was primarily driven by environmental and operational factors rather than fluctuations in stock biomass. Depth was the strongest predictor of catch rates, followed by swordfish catch and Sea Surface Salinity. A spatial model did not significantly improve results, suggesting that the incorporated environmental covariates accounted for most of the spatial variation in catchability across the fishing grounds.

It was indicated that environmental factors (salinity, sea surface temperature, depth, turbidity, chlorophyll-a, suspended particulate matter (spm)) were evaluated using GAMs for the non-linear relationship with catch rates by set for fishing seasons in 2024 and 2025. Results indicate that depth is the main factor highly associated with catch rates of albacore in particular for the range above 200m, while negative correlated with catch rates of swordfish which are mainly caught below 200m in this area.

The Group expressed reservations on the conclusions proposed due to limited data in time (2 yrs) and season (3 months) used for the analysis. The author indicated that these results should be considered preliminary and that there is the intention to continue the research during the following years. The Group acknowledged the initiative and the analysis that identified potentially important parameters/ factors for the standardization of indices of abundance as well as the need to have high resolution of fishery operations to better account for spatial temporal and environmental factors that affect the catchability of Mediterranean albacore. It was also noted the importance of extending this type of analyses and evaluations for most of the fisheries catching Mediterranean albacore in advance to the next evaluation of the stock.

5. Assessment models (South): specifications of data inputs and modeling options

5.1 Surplus Production Model

The Bayesian surplus production model JABBA will be applied following the approach adopted in the 2020 stock assessment (Anon., 2020; Winker *et al.*, 2020). The primary configuration corresponds to a continuity run, maintaining the same model structure and parameterization used in the 2020 assessment, updated to include data through 2024. In addition, alternative model configurations will be explored to evaluate structural and prior-related uncertainty.

In the continuity configuration, the production function will be specified as Fox model ($B_{MSY}/K = 0.37$). The prior for the intrinsic growth rate (r) will be assigned as a vaguely informative prior for $r \sim \ln(\log(0.2),1)$. For the carrying capacity (K) it will be used default settings of the JABBA R package in the form of vaguely informative lognormal prior with a large CV of 100% and a central value that corresponds to eight times the maximum total catch. Initial depletion will be specified using a Beta distribution with a mean of 0.9 and CV of 10%. The error structure will include both process and observation error, estimated within the model, and CPUE series will be weighed using model-based weighting.

Catch inputs will consist of the updated total removals from Task 1NC, including landings time series extended through 2024. Abundance indices will follow the structure agreed during the meeting, incorporating the updated CPUE series (see Section 4.1).

Base case scenario:

- Chinese Taipei longline: 1970–1980, 1981–2024
- Japan longline: 1979–2007
- Brazil–Uruguay longline: 1978–2024
- South Africa baitboat: 2003–2024

Sensitivity scenario:

- Historical Japan longline: 1959–1969

Uncertainty in the CPUE series will be represented using CVs derived from the standardization process, with a minimum threshold of 0.2 applied. Specifically, whenever the estimated CV for a given series is lower than 0.2, it will be increased to 0.2, while values greater than 0.2 will be retained unchanged, thereby preserving the original interannual variability of the series.

As part of the uncertainty analysis, additional configurations will be explored. These will include the use of an alternative production function (e.g. Pella–Tomlinson) and the specification of priors based on an Age-Structured Equilibrium Model (ASEM) approach (Winker *et al*., 2020a), derived from species-specific life-history parameters (see Section 2). These inputs will be consistent with those adopted in the Stock Synthesis model, ensuring alignment between modeling approaches and allowing biological information to directly inform prior specification.

5.2 Age Structured Model

Stock Synthesis will be used as the age-structured assessment model. Based on the available data and the adopted structure for the current assessment, the model will be parameterized using five fleet structures (**Table 11**). Catch inputs will consist of the updated total removals from Task 1NC, including landings/dead discards time series through 2024. Length-composition data (fork length, FL) will be compiled by the ICCAT Secretariat and assigned to the corresponding fleets and time periods. Abundance indices will follow the structure agreed by the Group during the meeting, incorporating the updated CPUE series, as described above (Section 4.1). Uncertainty in the CPUE series will be represented using the same approach that has been described for the surplus production models above.

A set of alternative parameterizations was defined to account for sources of uncertainty in the Stock Synthesis model. For growth, parameters will first be estimated internally by the model using informative priors derived from the stochastic estimation of the growth curve, based on the 25th, 50th and 75th quantiles of the parameter distributions (see SCRS/2026/078) and size composition data. This approach will be tested and its performance evaluated. However, given the absence of length-at-age data to inform growth estimation, if the model does not provide reliable or stable estimates, three fixed scenarios will be considered instead, using the same 25th, 50th and 75th quantiles of the growth parameter distributions. For age-specific natural mortality (M), three alternative values corresponding to the 25th, 50th and 75th quantiles will be implemented, following the protocol described in Section 2.4.

Regarding the stock–recruitment relationship, steepness (h) will be assigned a prior centered at 0.75, allowing the model to estimate this parameter internally, following the same approach adopted in the assessment of the northern stock (Urtizberea *et al*., 2023). If model diagnostics indicate convergence problems or unstable estimates, steepness will be fixed at 0.75. Recruitment variability (σR) will be fixed at 0.4, based on species-specific estimates obtained from the FishLife meta-analysis framework (Thorson *et al*., 2023).

The main life-history parameters that will be used are depicted in **Table 12.** The length–weight relationship parameters (a and b) will be adopted from the ICCAT Manual (Penney, 1994). For maturity, the base configuration will assume that albacore reaches 50% maturity at age 5 (Bard, 1981) and 100% maturity at age 6 (Urtizberea *et al*., 2023). Sensitivity analyses will be conducted using alternative maturity ogives, including those estimated for the South Atlantic by Travassos *et al.* (2025), as well as the last preliminary maturity ogive estimated for the northern stock (SCRS/2026/079, Busawon *et al*., 2026).

Overall, the combination of the three alternative growth parameterizations and the three natural mortality values will define a discrete uncertainty grid composed of nine scenarios. Specifically, the model will evaluate all combinations between the growth curves derived from the 25th, 50th and 75th quantiles of the von Bertalanffy growth function (VBGF) parameter distributions and the natural mortality estimates corresponding to the 25th, 50th and 75th quantiles.

The Group agreed that a certain degree of flexibility in model parameterization should be retained by the modeling team, given that this represents the first age-structured model application for this stock and that model behavior and convergence remain uncertain. Therefore, it was recommended to adopt a stepwise modeling approach, starting from a simpler and more stable configuration and progressively increasing model complexity as diagnostics indicate adequate convergence and performance.

6. Management Strategy Evaluation (MSE): South

Presentation SCRS/P/2026/035 provided an overview of the ongoing development of the MSE framework for the South Atlantic albacore stock. The presentation reviewed previous work conducted in 2025 and noted that the framework is being further developed using preliminary implementations based on data updated through 2024. Results were based on a preliminary operating model (OM) consistent with the structure used in 2025 (Hordyk *et al.*, 2025), informed by an updated Stock Synthesis configuration incorporating revised catch data and the updated Chinese Taipei longline index. Under this configuration, the model suggests that stock biomass in 2024 (terminal year) is above the level associated with maximum sustainable yield, at approximately 1.5 times that reference point, following a trajectory fluctuating around it. Preliminary projections also included the testing of six Candidate Management Procedures (CMPs), illustrating the ability of the framework to evaluate both empirical and model-based approaches.

Also, the proposed MSE workplan and timeline were discussed by the Group. Following completion of the stock assessment in 2026, subsequent work will focus on refining key uncertainties to be incorporated into the operating models, including the definition of robustness scenarios, as well as on the development and tuning of CMPs. Preliminary results are expected to be presented to the SCRS in September 2026. Further refinement and development will continue through 2027, leading to consideration by the Commission, with a view to possible adoption of a MP and implementation of total allowable catch (TAC) measures in 2028. The Group noted, however, that the timeline is ambitious, recalling that *Resolution by ICCAT on development of initial operational management objectives for southern Atlantic albacore* (Res. 24-09) specifies that adoption should occur no later than 2029, while also noting that a potential 2028 adoption is reflected in the Revised roadmap for the ICCAT MSE processes adopted by the Commission in 2025 (Anon., 2026, Annex 4) approved by the Commission.

The Group also discussed the data lag to be used in the framework and suggested a no more than a two-year lag, consistent with approaches adopted in other ICCAT MSE processes. In addition, the issue of tuning CMPs was raised, particularly the potential advantages and limitations of tuning to specific performance metrics such as the probability of being in the green Kobe (PGK) zone. It was noted that focusing on tuning to achieve a given probability threshold (e.g., 60% PGK) may not be necessary to achieve current management objectives. Given that the MSE is still at an early stage of development, it was agreed that these technical aspects will require further consideration and will be refined over the coming years. The MSE technical team will continue working intersessionally to refine the uncertainty grid, complete update of the MSE OMs based on the final model of the 2026 Albacore Stock Assessment Meeting (22-25 June 2026) by mid-2026, and conduct CMP testing, with the aim of presenting results for review by the SCRS and relevant Species Groups later in the year.

7. Management Strategy Evaluation (MSE): North

The Group noted the requests made by its Intersessional Meeting of Panel 2 (3-5 March 2026) (Anon., in press) that include:

- No more than 15% probability for the stock being below the limit reference point (i.e. $0.4*B_{MSY}$);
- Evaluate alternative stability clause (10% maximum increase/decrease in TAC between management periods);
- Not evaluating models with a threshold biomass smaller than B_{MSY};
- Check the performance of the MP described in *Recommendation by ICCAT on conservation and management measures, including a management procedure and exceptional circumstances protocol, for North Atlantic albacore* (Rec. 21-04) with the new MSE framework as well as few alternative CMPs (max 4 to 6);
- Develop additional robustness tests that include potential impacts linked to Climate Change (e.g. increase/reduction of baseline recruitment and its variability).

7.1 Alternative MP results

The Group reviewed document SCRS/2026/058 on alternative CMPs for northern Atlantic albacore. Three CMP types - one model-based and two empirical - were assessed. An updated CMP using a new biomass estimator (SPiCT) and spatial abundance indices is expected to maintain stock levels similar to previous evaluations (91% PGK). Other requested model-based options with varying harvest control rules also meet management goals (PGK>60%). Among the tested preliminary empirical CMPs, only the pseudo-constant catch at 42,000 tons achieved the objective; the index-based version did not.

This MSE uses 400 Operating Models (OMs) of four categories with varying weights for data sources and running 100 iterations per category. It spans three-year cycles, applying TAC across the entire period, and incorporates a custom Observation Error Model that has been approved by the species group since 2023.

The Group evaluated whether updating the existing MP (Rec. 21-04) by incorporating a new status estimator (SPiCT instead of *mpb*) and area specific indices would be adequate. This revised procedure would apply the same harvest control rule as before, effectively maintaining the current approach for responding to stock assessments. The Group supported the replacement of the current MP with the new estimator and indices.

The Group noted that the index-based MP might not be effective in its current configuration because of the responsiveness parameters (α and β), which determine how the TAC is adjusted between management periods. Additionally, the Group suggested that the MP could take into account more than just two years of index values.

The pseudo-constant catch was designed to offer a stable management system that only responds when abundance indices drop below reference values. The two empirical CMPs were presented for discussion and if the Commission requests so, they could be refined with alternative values for the control parameters.

The Group revised the visualization tools integrated with the MSE software (FLBEIA), including a Shiny application that demonstrates outcomes and highlights trade-offs among management objectives and the Trial Specification Document, available at the ICCAT repository.

The Group noted that the development plan for this MSE involves improving the index-based parameters, conducting thorough robustness testing, and updating the Trial Specification Document. The Group agreed to pursue these activities within the MSE subgroup before the next intersessional meeting.

7.2 Exceptional Circumstances (EC) based on catch and CPUE updates

The Group noted that this year's MP (Rec. 21-04) indices are within the simulated CPUE confidence intervals in the MSE framework. Since 2025 catch data is not yet available, potential Exceptional Circumstances (ECs) affecting the MP will be reassessed at the September 2026 Species Group meeting.

8. Atlantic Albacore tuna Year Programme (ALBYP)

The Group revised the multiyear Albacore Year Programme (ALBYP) plan that was put forward in 2025, including the priorities among tasks. It was noted that the progress made for different tasks had been already presented and discussed on earlier agenda items (namely the Biology and MSE sections) as input for the current meeting.

In the North Atlantic, the reproductive biology study is planned to be concluded on 2026, while tagging is planned to be conducted in the Bay of Biscay (smaller fish) and the Canary Islands/Galicia (large fish) soon.

SCRS/P/2026/034 provided a summary of the southern activities. The biological studies have been presented under agenda item 2 and are planned to be finalized in 2027, although there yet remain some logistic difficulties in the transportation of samples and substantial uncertainty exists about growth of the southern stock. Tagging trials have not been successful and the Group noted that this could be improved if additional budget was allocated for dedicated tagging campaigns (instead of the current opportunistic approach), and additional scientific teams from different CPCs were embarked on the study.

SCRS/P/2026/038 provided a summary of the Mediterranean ALBYP research, per priority topic. The Balearic larval survey calibration study has started, and it is expected that results will be presented at the Albacore Stock Assessment Meeting (22-25 June 2026). The ALBYP Mediterranean network continues to advance coordinated research through expanding larval surveys, harmonized methodologies, new biological and fisheries data (notably from the eastern Mediterranean), environmental data collection, and plans for an informal Mediterranean science meeting. Outcomes will be brought to the Albacore Species Group.

The Group will begin reviewing the research priorities within the Mediterranean ALBYP in September 2026 and update it for the next biannual cycle (2028-2029).

Finally, the Group mentioned the need to continue working on the improvement of Mediterranean albacore Task 1 and Task 2, especially for the historical period (see section 9). This is a recurrent issue where the ICCAT Secretariat has already invested substantial effort in the past. The Group noted that, unless statistics are improved, the ability to conduct robust assessments is impaired and might require substantial assumptions about the basic catch data series.

9. Recommendations on research and statistics

Results from the standardized CPUE in SCRS/2026/073, indicate that the Japanese longline CPUE for South Atlantic albacore since 2008 was associated with relatively high uncertainty due to the effects of targeting changes in the fleet. In future work, it was recommended to examine targeting by tracking vessel-specific changes in species composition and identifying vessels that primarily target albacore. Also, standardization methods that more explicitly address changes in targeting - such as clustering techniques, the use of species composition proportions or time-blocking - should be explored. Based on these investigations, the potential use of data collected since 2008 for CPUE standardization should be evaluated in the future.

The Group continued to recommend improving Task 1 and Task 2 data from the Mediterranean albacore. Specifically, there is a need to revise the assignment of catch to different gears, either because large amounts are unclassified in historical records, or because they are assigned to unlikely gear(s) (i.e. purse seine).

The Group continued to recommend conducting the Mediterranean wide growth studies combining all available data sources around it, including, to the extent possible, both the data sets identified in the past as well as those new datasets presented in this meeting (i.e., Egypt).

The Group acknowledged efforts to create new indices of abundance in the Mediterranean (i.e., Tunisian LL) and recommended continuing CPUE data collection (both in the future and, if possible, retrospectively) and its standardization for creating new indices available for future assessments.

The Group encouraged the finalization of research studies aiming to determine biological parameters (growth and reproductive parameters) of albacore in the North and South Atlantic. This includes the completion of the growth calibration and validation studies using bomb radiocarbon and the estimation of the maximum age. For this, it is encouraged that available samples for albacore from different size classes and areas be made available. In addition, the Group recommended comparing the growth calibration study with otolith chemistry studies to be able to incorporate the effect of potential different geographical origins of albacore tuna.

10. Other matters

10.1 Use of funds and status of 2026 Research funding

The ICCAT Secretariat provided the Group with an update on the use of science project funds between 2021-2025. It was noted that in most years the Group has made almost full use of available funds, 2022 and 2024 being the exception. It was highlighted some difficulties on the collection of biological samples, but particularly regarding shipping those samples due to a complex and time-consuming authorization process to allow the entrance of the samples in Brazil, which has caused some underutilization of the funds and delay on the development of the studies. In 2025, 98% of funds available were used and in 2026 the Species Group was on track to fully use approved funds as contracts for most projects were already signed or in final stages of negotiation.

The ICCAT Secretariat also highlighted the importance of duly justifying the funding request, namely by associated those to specific Commission requests. The Group also noted the need to report back on progress made and to inform the Commission of the expected completion dates of the different studies.

Finally, it was recommended to the Group to avoid major changes to funding requests for 2027, unless duly justified by the achievement that might have been made. Instead, new activities can be discussed within the long-term planning of ALBYP and funding request be reconsidered for the next biennial period (2028-2029).

10.2 Intersessional workplan

The following tasks were identified, to be advanced by analysts and the modelling/MSE subgroup. Subgroup meetings are to be scheduled based on availability of members and progress of the following tasks:

South Atlantic:

- Provide final catch by fleet, including landings and dead discards by ICCAT Secretariat before 27 April 2026.
- Preliminary fits of SS3 and JABBA, check diagnostics.
- Decisions on which parameters can be estimated and which need to be fixed (e.g. growth, steepness).
- Sensitivity analyses to modeling options or input data (biology, CPUE).
- Preliminary assessment and identification of main uncertainties affecting the assessment.
- Present subgroup results (around mid-May 2026) to the albacore Species Group before the Albacore Stock Assessment Meeting (22-25 June 2026).

North Atlantic:

- Preliminary MP iteration (with available Task 1 approximation).
- Preliminary evaluation of Exceptional Circumstances.
- Improve parameterization/performance of empirical MPs.
- Discuss results in the subgroup before they are presented in the Albacore Stock Assessment Meeting (22-25 June 2026).

10.3 Responses to the Commission

The ICCAT Secretariat and the SCRS Chair provided a summary of the new web application to handle responses to the Commission. In summary it contains all the requested feedback, as well as the previous responses provided by the SCRS.

It was clarified that SCRS officers are requested to make sure that the information contained there is correct. For that, they could edit or delete both requests and responses.

The Group made several suggestions to improve some of the categories for requests and suggested to include other new requests (e.g., “recurrent” for EC) that require annual or periodic responses.

The Group also clarified that the text under “Intro” was optional, and that to the extent possible should avoid repeating text, or part of the text, in the response itself, to avoid misunderstandings and misinterpretation of the SCRS responses.

11. Adoption of the report and closure

The Report of the 2026 Albacore Data Preparatory Meeting was adopted during the meeting. The Chairs and the ICCAT Secretariat thanked all the participants for their efforts to work effectively and efficiently throughout the meeting. The meeting was adjourned.

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Table 1. Summary of the key assumptions and decisions for natural mortality.

Component	*Decision*	*Discussion*
Longevity (i.e. Maximum age)	15 years	The Group felt that this was the best available data on longevity, noting the relatively small sample sizes.
Average natural mortality of adult ALB-S	0.36 based on Hamel and Cope 2022	
Ages to apply the average	Mature Ages [6-10] Assuming SCRS/2026/78 growth model	This is based on the ages in the model for which 100% maturity is assumed.
Functional form of M-at-age	Lorenzen (2000)	Considered current best-practice when no estimates of M-at-age are available

Table 2. Mortality values calculated following Hamel and Cope (2022).

Assumption	*Average adult M values*	*Weights*
80% CI (10th,50th and 90th quantiles)	0.24, 0.36, 0.54	0.34, 0.51, 0.15
50% CI (25th, 50th and 75th quantiles)	0.29, 0.36, 0.44	0.37, 0.38, 0.25

Table 3. Summary of the biological parameters and conversion factors for the 2026 South Atlantic albacore stock assessment. Values for the growth parameters indicated 25%, the median and 75% percentiles.

South Stock	*Parameters*	*Source*
Growth	$L\infty$ = 115.93cm; K = 0.235; t_0 = -0.561	Mourato *et al.* (SCRS/2026/078)
	$L\infty$ = 121.24 cm; K = 0.238; t_0 = -0.891	
	$L\infty$ = 125.02 cm; K = 0.237; t_0 = -1.217	
Length-weight relationship	a=1.3718x 10^{-5} b=3.0973	Penney (1994)
Maturity	50% of mature fish at 90 cm (age 5)	Bard (1981) (North Stock)
Natural mortality	M = 0.36	Based on Hamel and Cope (2022)
A_{max}	*15*	Artetxe *et al.* (2024)

Table 4. Total Task 1 nominal catches (tones, landings and dead discards) of the southern albacore stock (ALB-S) by year, sampling area and gears.

	AL33									AL34									TOTAL
Year	Bait boat	Gillnet	Handline	Longline	Purse seine	Rod & Reel	Troll	Unclass.	Sub-Total	Bait boat	Gillnet	Handline	Longline	Purse seine	Rod & Reel	Trawl	Unclass.	Sub-Total	
1950									0								0	0	0
1951									0								0	0	0
1952									0								0	0	0
1953									0								0	0	0
1954									0								0	0	0
1955									0								0	0	0
1956									0				21				0	21	21
1957									0				725				0	725	725
1958									0				1047				0	1047	1047
1959									0				4715				0	4715	4715
1960									0				10475				0	10475	10475
1961									0				10365				400	10765	10765
1962									0				17171				1800	18971	18971
1963									0				17385					17385	17385
1964	22								22				25977					25977	25999
1965				81					81				29764					29764	29845
1966				106					106				27190					27190	27296
1967				42					42				15841				0	15841	15883
1968	38			75					113				25575				0	25575	25688
1969				30					30				28463				0	28463	28493
1970				0					0				23653				0	23653	23653
1971				63					63				24822				0	24822	24885
1972				80	10				90				32999		100			33099	33189
1973				81	3				84	1			28053		96			28150	28234
1974				169	13				182	97			19384		53			19534	19716
1975				183	1				184	46			17273		104			17423	17607
1976				311	47				358				18867		150			19017	19375
1977	65			562	114	1		143	885	1			20420		149			20570	21455
1978	43			466	51	12		39	611				22334		150			22484	23095
1979				393	183	2		134	712	53			21462	5	408			21928	22640
1980	113			417	572	4		86	1192	1233			20254	7	260			21754	22946
1981				309	1803	7		20	2139	1721			20117	1	62			21901	24040
1982	52			758	1268	11		19	2108	2523			24497	81	456		7	27564	29672
1983	53			714	693	7		0	1467	1741			11227	6	422		55	13451	14918
1984	982			536	331	9		5	1863	3184			9298	34	11		209	12736	14599
1985	1446	0		320	173			0	1939	6463			22352	9	181		153	29158	31097
1986	1042			525	235			6	1808	5787			29290	9	38		356	35480	37288
1987	964			332	948	2		8	2254	7217			30632		58		469	38376	40630
1988	1170			397	185	1		9	1762	6526			21497		44		344	28411	30173
1989	559			434		1			994	6834			18973		56		354	26217	27212
1990	761			487	4	1			1253	5220	927		21103		60		151	27461	28714
1991	99			1423	417	5			1944	3355			20602		55		60	24072	26016
1992	184			3133	2518	28			5863	6306			24035		54		306	30701	36564
1993	496			3884	1450	38			5868	6845			20065		36		0	26946	32814
1994	1577			1107	1065	5			3754	7757			23698		89		2	31546	35301
1995	855			1027	413	82			2378	6154			19012		10			25176	27554
1996	506			1146	258	47			1957	6407			19853		209	0		26469	28426
1997	319			832	118	18			1287	7773			18715		127	120		26735	28022
1998	529			3076	434	1			4040	9823			16723			9		26555	30595
1999	626			2438	183	1			3248	6082			18202		73	52		24409	27656
2000	1113			4149	58	58			5377	5703			20250		58	0		26011	31388
2001	659			6843	25	12			7539	9684			21196		377			31257	38795
2002	796			3733	39	2			4569	8915			17939		323	0		27177	31746
2003	1218		0	2061	323	3			3605	5755			18565		82	12		24414	28019
2004	244			517	16	1		2	780	7232		96	14219		201	18		21765	22545
2005	197			1483	499	35		0	2213	4887			11494		288	0		16668	18882
2006	85			2319	442	62		9	2916	5791			15421		324			21537	24453
2007	294			1014	58	46		21	1432	3081			14073		1696			18851	20283
2008	160			2769	81	94		98	3202	4190			10448		1028			15666	18867
2009	22		0	3686	144	81		34	3967	7903		96	8427		1855			18281	22248
2010	39			4947	225	3		30	5244	3709		89	8524	130	1529			13981	19225
2011	198	41	104	5498	132	120		5	6097	5740			10947	73	1268			18029	24126
2012	4656		64	3312	428	2		0	8462	2275			14535					16810	25272
2013	4374		264	3268	58	2			7966	838			10620					11458	19424
2014	3749		7	2747	44				6547	1016			6160					7176	13723
2015	3958		0	4573	131				8662	1008			5531					6539	15201
2016	2056			3976	83			108	6223	893			7267					8160	14383
2017	1640			4941	191			114	6886	205			6733					6938	13825
2018	2354		84	5633	19				8090	874			8082	0				8956	17045
2019	2647		113	5920	2				8681	206			6590	1				6797	15478
2020	4085		17	5586	11				9699	213			8173	0				8385	18084
2021	3494		0	6190	21				9704	940			14323					15264	24968
2022	5415		163	9686	36				15300	1599		35	6571					8205	23505
2023	94		103	4720	69		0		4986	3255		13	13407					16675	21661
2024	5		69	5790	20				5884	4717		28	9725					14470	20354

Table 5. SCRS standard catalogue for southern albacore for the last 30 years (top 97% total accumulated catches).

Table 1. ALB-S stock

						T1 Total	27500	27594	29927	27216	31073	38593	31555	27540	22142	18085	23619	19906	18262	20763	17967	22943	24064	18289	13493	14944	13913	13021	16332	14843	17500	24708	23039	21264	19899	11652				
Score	**6.24**																																						
Species	**Stock**	**Status**	**FlagName**	**GearGrp**	**DSet**		**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Rank**	**%**	**%cum**	**Σ**
ALB	ATS	NCC	Chinese Taipei	LL	t1		18956	18165	16106	17377	17221	15833	17321	17351	13288	10730	12293	13146	9966	8678	10975	13032	12813	8519	6675	7157	8907	9090	9227	9626	9851	10519	8894	10895	11905	10553	1	54.50	54.50	365069
ALB	ATS	NCC	Chinese Taipei	LL	t2		ab	abc	abc	abc	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	1			
ALB	ATS	CP	South Africa	BB	t1		5425	6581	8401	5010	3463	6715	6057	3323	4153	2856	3365	2024	2334	2967	2446	2029	3466	3395	3620	3898	2001	1640	2353	2190	3779	3490	5412	2312	4563		2	16.31	70.81	109267
ALB	ATS	CP	South Africa	BB	t2		ab	ab	b	ab	abc	ab	abc	abc	abc	abc	ab	ab	ab	a	a	ab	ab	ab	ab	ab	ab	ab	a	a	a	a	ab	ab	ab		2			
ALB	ATS	CP	Namibia	BB	t1		982	1192	1422	1072	2240	2969	2858	2432	3079	2031	2426	1058	1856	4936	1263	3711	2275	838	1016	1008	893	205	874	206	213	940	1597	917	154		3	6.97	77.78	46662
ALB	ATS	CP	Namibia	BB	t2		-1	-1	-1	abc	c	ab	ac	-1	abc	abc	abc	abc	abc	abc	abc	abc	ab	abc	abc	ab	abc	abc	abc	abc	abc	abc	ab	bc	a		3			
ALB	ATS	CP	Japan	LL	t1		435	424	418	601	554	341	231	322	509	312	316	238	1370	921	973	1194	2903	3106	1131	1752	1096	1189	2985	1543	912	1649	1837	1554	2302	1099	4	5.11	82.89	34217
ALB	ATS	CP	Japan	LL	t2		abc	abc	abc	abc	abc	abc	abc	abc	abc	ac	abc	abc	abc	abc	abc	abc	ab	ab	ab	ab	ab	ab	ab	ab	ab	a	a	ab	ab	a	4			
ALB	ATS	CP	Brazil	LL	t1		807	589	3013	1478	3760	6240	2865	1844	285	359	267	222	233	150	207	920	824	778	326	431	494	383	259	284	211	497	342	222	506		5	4.30	87.19	28797
ALB	ATS	CP	Brazil	LL	t2		a	ab	ab	ab	ab	a	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	a	a	a	a	a	ab	ab	ab	ab	ab	ab	ab		5			
ALB	ATS	CP	Namibia	LL	t1			7	7	90	178	450	105	721	250	313	2674	138	102	0	57	80	145	10	41	54	101	8	14	55	1953	7225	4722	4856	120		6	3.65	90.84	24475
ALB	ATS	CP	Namibia	LL	t2			-1	-1	a	-1	ab	ac	-1	ab	ab	ab	ab	a	ab	ab	abc	a	ab	a	a	a	a	abc	abc	abc	abc	ab	abc	abc		6			
ALB	ATS	CP	South Africa	RR	t1		209	127		73	58	377	323	82	201	288	324	1696	1028	1855	1529	1268															7	1.41	92.25	9437
ALB	ATS	CP	South Africa	RR	t2		a	a		-1	-1	-1	-1	-1	-1	a	a	a	a	a	a	-1															7			
ALB	ATS	CP	EU-España	LL	t1		180	190	20	871	282	573	829	183	81	261	358	758	908	997	266	250	235	369	256	354	195	259	301	186	29	37	32	30	24		8	1.39	93.64	9312
ALB	ATS	CP	EU-España	LL	t2		ab	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	b	b	b	b	b	b	b	b	b	b	ab		8			
ALB	ATS	CP	Brazil	BB	t1		12	63	405	394	627	619	363	803	235	197	85	293	156	18	34	198	1190	979	129	60	55	0	1	457	306	4	5	120	5		9	1.17	94.80	7810
ALB	ATS	CP	Brazil	BB	t2		a	a	a	a	-1	a	a	a	a	a	a	ab	a	a	a	a	a	a	a	a	a	a	a	a	a	-1	a	a	a		9			
ALB	ATS	CP	St Vincent and Grenadines	LL	t1						2116	4292	44				65	160	71	51	31	94	92	97	110	100	107	101	98	31		14	23					10	1.15	95.95	7698
ALB	ATS	CP	St Vincent and Grenadines	LL	t2						-1	-1	a		a		a	a	a	a	a	a	-1	ab	a	ab	ab	ab	ab	abc		abc	ab				10			
ALB	ATS	CP	South Africa	LL	t1				11	18	89	144	127	64	52	55	46	78	107	125	83	82	86	115	99	132	65	145	220	265	247	333	175	358	320		11	0.54	96.50	3639
ALB	ATS	CP	South Africa	LL	t2				a	ab	ab	ab	abc	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	a	ab	ab	ab		11			
ALB	ATS	NCO	Vanuatu	LL	t1										0	684	1400	96	131	64	104	85	35	83	91												12	0.41	96.91	2774
ALB	ATS	NCO	Vanuatu	LL	t2										a	a	a	-1	-1	-1	a	ab	ab	a	a												12			
ALB	ATS	CP	EU-Portugal	BB	t1		494	256	124	232	486	40	433	415	9																						13	0.37	97.28	2489
ALB	ATS	CP	EU-Portugal	BB	t2		-1	-1	-1	-1	-1	a	a	a	a																						13			

Table 6. Summary of albacore conventional tagging data available in ICCAT. Number of albacore releases by year and associated recoveries by year. Also shown, the number of recoveries without recovery dates (unk).

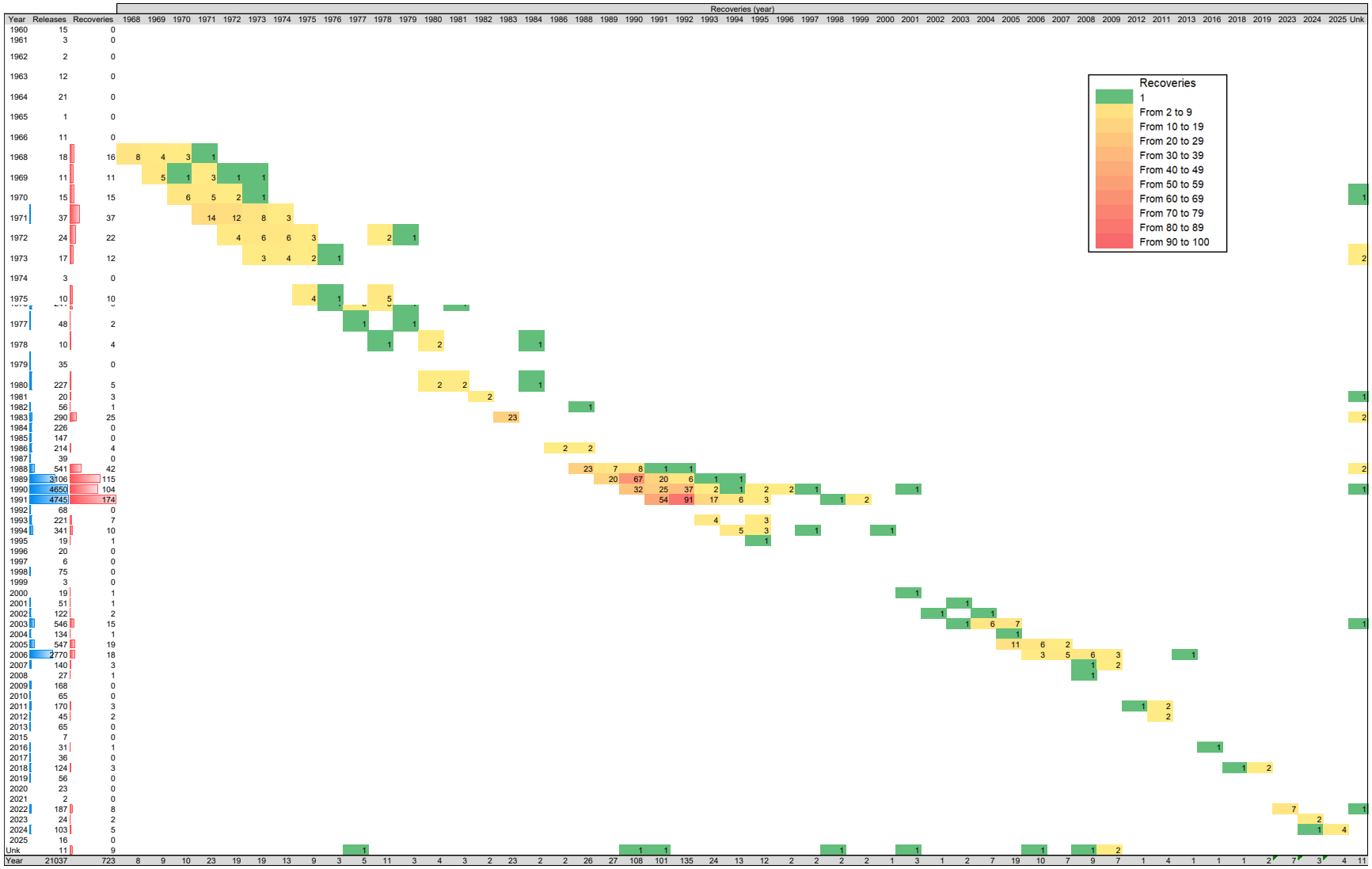

Table 7. Summary of albacore conventional tagging data: number of recoveries grouped by number of years at liberty in each release year. The last column shows the recovery rate (%) in each release year.

Number of tag Albacore (*Thunnus alalunga*)											
			Years at liberty								
Year	Releases	Recaptures	< 1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10+	Unk	% recapt*
1960	15	0									
1961	3	0									
1962	2	0									
1963	12	0									
1964	21	0									
1965	1	0									
1966	11	0									
1968	18	16	10	3	2	1					88.9%
1969	11	11	6	2	2		1				100.0%
1970	15	15	7	4	2	1				1	100.0%
1971	37	37	20	11	4	2					100.0%
1972	24	22	4	6	6	3		3			91.7%
1973	17	12	5	3	2					2	70.6%
1974	3	0									
1975	10	10	4	1	3	2					100.0%
1976	241	9	1	6		1		1			3.7%
1977	48	2	1		1						4.2%
1978	10	4	1		2			1			40.0%
1979	35	0									
1980	227	5	4				1				2.2%
1981	20	3	2							1	15.0%
1982	56	1						1			1.8%
1983	290	25	23							2	8.6%
1984	226	0									
1985	147	0									
1986	214	4	2	1	1						1.9%
1987	39	0									
1988	541	42	30	7	2	1				2	7.8%
1989	3106	115	58	40	11	5	1				3.7%
1990	4650	104	42	41	12	2		5	1	1	2.2%
1991	4745	174	108	46	9	6	2	3			3.7%
1992	68	0									
1993	221	7	4		3						3.2%
1994	341	10	8			1		1			2.9%
1995	19	1	1								5.3%
1996	20	0									
1997	6	0									
1998	75	0									
1999	3	0									
2000	19	1		1							5.3%
2001	51	1			1						2.0%
2002	122	2	1	1							1.6%
2003	546	15	6	6	2					1	2.7%
2004	134	1		1							0.7%
2005	547	19	13	4	2						3.5%
2006	2770	18	7	5	4	1		1			0.6%
2007	140	3	1	1	1						2.1%
2008	27	1	1								3.7%
2009	168	0									
2010	65	0									
2011	170	3	2	1							1.8%
2012	45	2	2								4.4%
2013	65	0									
2015	7	0									
2016	31	1	1								3.2%
2017	36	0									
2018	124	3	3								2.4%
2019	56	0									
2020	23	0									
2021	2	0									
2022	187	8		8							4.3%
2023	24	2		2							8.3%
2024	103	5	5								4.9%
2025	16	0									
Unk	11	9								9	81.8%
	21037	723	383	201	72	26	5	16	1	19	3.4%

Recoveries	
1	1
10	From 2 to 9
20	From 10 to 19
30	From 20 to 29
40	From 30 to 39
50	From 40 to 49
60	From 50 to 59
70	From 60 to 69
80	From 70 to 79
90	From 80 to 89
100	From 90 to 100
110	> 100

Table 8. Criteria evaluation table for available indices of abundance for the southern albacore stock in 2026.

Use in stock assessment?	*Adequate*	*Adequate*	*Adequate*	*Adequate*	*Incomplete*
SCRS Doc No.	SCRS/2026/062	SCRS/2026/072	SCRS/2026/065	SCRS/2026/071	SCRS/2026/069
Index Name:	Brazil-Uruguay LL	JPNLL South	Chinese Taipei LL South	South Africa baitboat	Namibia LL
Data Source (state if based on logbooks, observer data etc.)	Logbooks	Logbooks	Logbook, e-logbook and Task 2	Logbook	Logbook
Do the authors indicate the percentage of total effort of the fleet the CPUE data represents?	Yes	No	Yes	Yes	No
If the answer to 1 is yes, what is the percentage?	71-80%		91-100%	71-80%	
Are sufficient diagnostics provided to assess model performance?	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient
How does the model perform relative to the diagnostics?	Well	Well	Well	Well	Mixed
Documented data exclusions and classifications?	Yes	Yes	Yes	Yes	Yes
Data exclusions appropriate?	Yes	Yes	Yes	Yes	Yes
Data classifications appropriate?	Yes	Yes	Yes	Yes	Yes
Geographical area	Atl SW	Atl S	Atl S	Atl SE	Atl SE
Data resolution level	Set	OTH	Set	OTH	Set
Ranking of Catch of fleet in TINC database (use data catalogue)	1-5	1-5	1-5	1-5	6-10
Length of time series	Longer than 20 years	Longer than 20 years	Longer than 20 years	Longer than 20 years	Longer than 20 years
Are other indices available for the same time period?	Many	Few	Few	Many	Many
Are other indices available for the same geographic range?	Few	Few	Few	Few	Few

Use in stock assessment?	*Adequate*	*Adequate*	*Adequate*	*Adequate*	*Incomplete*
Does the index standardization account for Known factors that influence catchability/selectivity? (e.g. Type of hook, bait type, depth etc.)	Yes	Yes	Yes	Yes	No
Estimated annual CV of the CPUE series	Medium	Variable	Low	Low	Medium
Annual variation in the estimated CPUE exceeds biological plausibility	Unlikely	Possible	Unlikely	Possible	Likely
Is data adequate for standardization purposes	Yes	Yes	Yes	Yes	Yes
Is this standardized CPUE time series continuous?	Yes	Yes	Yes	Yes	Yes
For fisheries independent surveys: what is the survey type?					
For 19: Is the survey design clearly described?					
Other comments			The Group suggested 1970-1980 from 5x5 aggregated data, 1981-2025 by set by set	Covers limited spatial area	

Table 9. Abundance indices for the southern albacore stock for the MP for the stock assessment in 2026.

Index	Brazil-Uruguay LL		Japan LL South				Chinese-Taipei		Chinese-Taipei		South Africa		Namibia LL	
Name	BRA-UGYLL		JPNLL1		JPNLL2		CTPLL1		CTPLL2		ZAF-BB		NAMLL	
SCRS Doc No.	SCRS/2026/062		SCRS/2020/093		SCRS/2026/072		SCRS/2026/065		SCRS/2026/065		SCRS/2026/071		SCRS/2026/069	
Age range	3-8+		3-8+		3-8+		3-8+		3-8+		2-3		3-8+	
Catch Units	Number		Number		Number		Number		Number		Weight		Number	
Effort Units	1000 hooks		1000 hooks		1000 hooks		1000 hooks		1000 hooks		Fishing days		1000 hooks	
Methods	Delta log-normal GLM		Negative binominal		sdmTMB		GLM(5x5data)		GLM(cluster)		tweedie GAM		delta GAM	
Used 2026 assessment	Yes		sensitivity		Yes		Yes		Yes		Yes		No	
Year	CPUE	CV	CPUE	CV	CPUE	CV	CPUE	CV	CPUE	CV	CPUE	CV	CPUE	CV
1959			40.39	0.14										
1960			38.09	0.14										
1961			30.60	0.08										
1962			21.93	0.08										
1963			21.23	0.08										
1964			21.31	0.08										
1965			14.36	0.06										
1966			13.05	0.07										
1967			13.87	0.09										
1968			12.80	0.08										
1969			7.75	0.08										
1970							37.25	0.04						
1971							39.41	0.04						
1972							30.25	0.04						
1973							25.30	0.05						
1974							27.25	0.04						
1975							31.46	0.04						
1976							30.61	0.04						
1977							33.41	0.04						
1978	1.11	0.18					32.81	0.04						
1979	1.42	0.14			1.58	0.05	30.30	0.04						
1980	1.85	0.12			3.34	0.05	30.23	0.04						
1981	0.49	0.45			3.14	0.04			16.96	0.04				
1982	0.83	0.23			3.81	0.04			17.24	0.04				
1983	1.11	0.18			1.04	0.06			16.04	0.05				
1984	1.77	0.11			1.92	0.04			18.42	0.05				
1985	0.92	0.21			2.96	0.04			17.34	0.04				
1986	0.91	0.21			2.84	0.05			16.71	0.04				
1987	1.17	0.17			1.52	0.06			14.41	0.04				
1988	1.00	0.19			1.59	0.05			10.99	0.05				
1989	1.32	0.15			3.10	0.03			10.39	0.05				
1990	0.78	0.29			3.21	0.03			11.43	0.05				
1991	1.18	0.17			2.73	0.03			13.45	0.04				
1992	1.20	0.16			3.73	0.04			14.64	0.05				
1993	2.04	0.13			3.51	0.03			12.59	0.04				
1994	1.60	0.12			4.24	0.03			15.26	0.04				
1995	1.38	0.14			3.40	0.04			15.85	0.04				
1996	1.48	0.13			3.56	0.03			16.29	0.04				
1997	1.35	0.14			3.64	0.04			17.97	0.03				
1998	2.07	0.09			4.17	0.05			15.50	0.04				
1999	1.36	0.14			5.35	0.03			13.67	0.03				
2000	1.17	0.17			4.99	0.04			12.10	0.03				
2001	1.12	0.17			2.28	0.05			14.37	0.04				
2002	1.07	0.18			1.35	0.07			12.15	0.03				
2003	0.83	0.23			1.61	0.04			12.90	0.04	1.13	0.01		
2004	0.72	0.27			3.48	0.04			15.95	0.03	0.81	0.02	0.17	0.18
2005	0.67	0.29			2.91	0.06			15.60	0.04	1.16	0.01	0.08	0.19
2006	0.82	0.24			4.29	0.06			11.94	0.04	1.07	0.02	0.19	0.20
2007	0.68	0.29			2.95	0.06			14.40	0.04	1.26	0.01	0.04	0.18
2008	1.18	0.17							14.50	0.04	1.04	0.02	0.03	0.21
2009	1.03	0.19							14.88	0.04	1.3	0.01	0.01	0.30
2010	0.71	0.27							16.29	0.04	1.15	0.01	0.01	0.23
2011	0.67	0.33							15.25	0.04	0.92	0.02	0.02	0.54
2012	0.58	0.34							14.59	0.04	0.74	0.02	0.07	0.22
2013	0.61	0.32							16.03	0.04	1.09	0.01	0.02	0.22
2014	0.68	0.29							13.47	0.04	1.32	0.01	0.02	0.20
2015	0.75	0.26							15.65	0.04	1.09	0.01	0.06	0.18
2016	0.60	0.32							16.03	0.04	0.63	0.03	0.05	0.18
2017	0.60	0.32							15.64	0.04	0.65	0.02	0.02	0.27
2018	0.64	0.31							16.93	0.04	0.77	0.02	0.02	0.27
2019	0.77	0.25							15.89	0.04	1.18	0.01	0.01	0.28
2020	0.51	0.38							15.59	0.04	1.04	0.02	0.98	0.20
2021	0.59	0.33							20.25	0.04	0.98	0.02	1.56	0.20
2022	0.62	0.31							17.86	0.04	0.93	0.02	1.14	0.19
2023	0.56	0.35							16.87	0.04	0.76	0.02	0.39	0.22
2024	0.34	0.57							16.88	0.04	0.97	0.02	0.22	0.24
2025									20.14	0.04				

Table 10. Abundance indices for the northern albacore stock for the MP and exceptional circumstances (EC) evaluation in 2026. The 2013 Japanese longline bycatch index value was excluded as in previous MP applications.

	US pelagic LL		Japan LL Bycatch*		Chinese-Taipei LL		Spain BB		Venezuela LL	
SCRS Doc No.	SCRS/2026/075		SCRS/2026/073		SCRS/2026/064		SCRS/2026/037		SCRS/2020/089	
Age range	3-8		3-8+		2-8+		1-4		5-8+	
Catch Units	Number		Number		Weight		Number		Number	
Effort Units	1000 hooks		1000 hooks		1000 hooks		Fishing days		1000 hooks	
Methods	Delta log-normal		Negative binominal		GLM		GLMM		Delta log-normal	
Year	Index	CV	Index	SE	Index	CV	Index	SE	Index	CV
1975			2.74	1.34						
1976			2.34	1.39						
1977			1.56	1.43						
1978			1.31	1.35						
1979			1.57	1.35						
1980			1.60	1.31						
1981			1.53	1.26			211.00	0.43		
1982			1.38	1.25			204.00	0.38		
1983			1.28	1.33			270.00	0.39		
1984			1.06	1.31			170.00	0.42		
1985			1.19	1.27			218.00	0.35		
1986			0.70	1.31			163.00	0.34		
1987	0.15	0.50	0.48	1.32			292.00	0.35		
1988	0.17	0.46	0.80	1.30			251.00	0.34		
1989	0.21	0.42	0.73	1.23			188.00	0.32		
1990	0.32	0.32	0.58	1.26			428.00	0.35		
1991	0.33	0.34	0.68	1.26			301.00	0.34	0.35	0.61
1992	0.23	0.41	0.55	1.26			334.00	0.35	0.41	0.63
1993	0.37	0.32	0.52	1.27			314.00	0.36	0.34	0.63
1994	0.40	0.30	0.70	1.24			369.00	0.36	0.68	0.51
1995	0.41	0.30	0.42	1.23			346.00	0.34	0.80	0.51
1996	0.24	0.42	0.40	1.21			350.00	0.34	0.79	0.45
1997	0.32	0.36	0.51	1.21			345.00	0.37	0.86	0.52
1998	0.32	0.38	0.86	1.21			390.00	0.35	1.07	0.42
1999	0.39	0.33	0.49	1.23	350.83	0.13	326.00	0.34	1.05	0.51
2000	0.35	0.33	0.83	1.21	220.66	0.20	526.00	0.33	1.15	0.43
2001	0.40	0.33	1.28	1.22	286.46	0.09	152.00	0.33	0.67	0.44
2002	0.32	0.39	1.18	1.26	339.92	0.08	130.00	0.35	0.84	0.53
2003	0.26	0.43	0.94	1.24	413.39	0.08	367.00	0.34	1.03	0.42
2004	0.25	0.45	0.64	1.22	412.69	0.08	387.00	0.34	1.08	0.45
2005	0.27	0.41	0.83	1.21	378.07	0.08	338.00	0.32	1.15	0.44
2006	0.21	0.50	0.79	1.25	295.83	0.09	754.00	0.34	1.19	0.4
2007	0.23	0.46	0.46	1.29	296.01	0.09	469.00	0.34	1.96	0.42
2008	0.17	0.57	0.41	1.28	228.21	0.10	347.00	0.34	2.01	0.5
2009	0.23	0.48	0.64	1.28	319.20	0.09	341.00	0.33	1.08	0.5
2010	0.29	0.41	0.92	1.28	418.94	0.09	370.00	0.33	0.88	0.54
2011	0.40	0.32	0.66	1.31	395.20	0.09	347.00	0.33	0.51	0.61
2012	0.33	0.37	0.74	1.33	385.22	0.09	531.00	0.33	0.78	0.52
2013	0.42	0.32	8.59*	1.32*	510.79	0.09	405.00	0.34	1.36	0.56
2014	0.54	0.26	1.52	1.33	475.56	0.09	265.00	0.34	1.86	0.56
2015	0.42	0.32	1.10	1.39	381.65	0.08	852.00	0.34	1.32	0.59
2016	0.42	0.31	1.72	1.34	338.87	0.08	604.00	0.34	0.79	0.56
2017	0.40	0.33	1.54	1.35	309.81	0.07	304.00	0.32	1.48	0.59
2018	0.25	0.45	0.90	1.33	311.94	0.07	1234.00	0.40	0.53	0.73
2019	0.39	0.31	1.74	1.34	269.89	0.07	973.00	0.40		
2020	0.49	0.26	1.10	1.35	313.32	0.07				
2021	0.51	0.26	1.07	1.37	395.80	0.08	845.00	0.41		
2022	0.24	0.39	1.83	1.38	316.75	0.08	568.00	0.34		
2023	0.20	0.47	1.31	1.39	349.50	0.07	574.00	0.34		
2024	0.26	0.39	1.29	1.37	328.78	0.07	518.00	0.33		
2025	0.20	0.47	2.55	1.43	434.96	0.09	623.00	0.33		

Table 11. Fleet structure, data and time periods to be used in the South Atlantic albacore Stock Synthesis model.

Fleet	Definition (FlagName and Gear Group)	Catch	Size composition data	CPUE
FL1	Chinese Taipei (LL), Korea (LL)	1964-2024	up to 2024	Chinese Taipei (LL) 1970-1980, 1981-2024
FL2	Japan (LL), China (LL), EU-Spain (LL), EU-Portugal (LL), USA (LL), Philippines (LL), St Vincent and Grenadines (LL), Vanuatu (LL), Honduras (LL), NEI (LL), Côte D'Ivoire (LL), United Kingdom (LL), Seychelles (LL), UK.Sta Helena (LL), Angola (LL), Senegal (LL), Trinidad and Tobago (LL)	1956-2024	1956-2024	Sensitivity run: Japan (LL) 1959-1969 1979-2017
FL3	Brazil (LL, SU), Uruguay (LL), Namibia (LL), Panama (LL), South Africa (LL, UN), Argentina (LL, TW, UN), Belize (LL), Cambodia (LL), Cuba (LL, UN)	1959-2024	1969-2024	BRA-UGY (LL) 1978-2024
FL4	South Africa (BB, HL, PS, RR, SP)	1973-2024	1980-2024	South Africa (BB) 2003-2024
FL5	all others	1961-2024	1961-2024	None

Table 12. Life-history parameters, values, sources, and implementation in the Stock Synthesis model, including natural mortality (M); growth parameters (L_∞, k, t_0); length–weight relationship parameters (a and b); age at 50% maturity (A_{50}) and age at 100% maturity (A_{100}); length at 50% (L_{50}) and 95% maturity (L_{95}); steepness (h); and recruitment variability (σR).

Parameters	Values	Source	Treatment
L_∞	115.93	25th quantile (see SCRS/2026/078)	Prior or Fixed
	121.24	50th quantile (see SCRS/2026/078)	Prior or Fixed
	125.02	75th quantile (see SCRS/2026/078)	Prior or Fixed
k	0.235	25th quantile (see SCRS/2026/078)	Prior or Fixed
	0.238	50th quantile (see SCRS/2026/078)	Prior or Fixed
	0.237	75th quantile (see SCRS/2026/078)	Prior or Fixed
t_0	-0.561	25th quantile (see SCRS/2026/078)	Prior or Fixed
	-0.891	50th quantile (see SCRS/2026/078)	Prior or Fixed
	-1.217	75th quantile (see SCRS/2026/078)	Prior or Fixed
M	0.29	25th quantile (section 2.4)	Fixed
	0.36	50th quantile (section 2.4)	Fixed
	0.44	75th quantile (section 2.4)	Fixed
a	1.37E-05	Penney (1994)	Fixed
b	3.09773		Fixed
A_{50}	5 years	Urtizberea *et al.* (2023)	Fixed
A_{100}	6 years		Fixed
L_{50}	73.46	Busawon *et al.* (2026)	Sensitivity
L_{95}	84.87		Sensitivity
L_{50}	94.9	Travassos *et al.* (2025)	Sensitivity
L_{95}	105.8		Sensitivity
h	0.75	Urtizberea *et al.* (2023)	Prior or Fixed
σR	0.4	*Fishlife*	Fixed

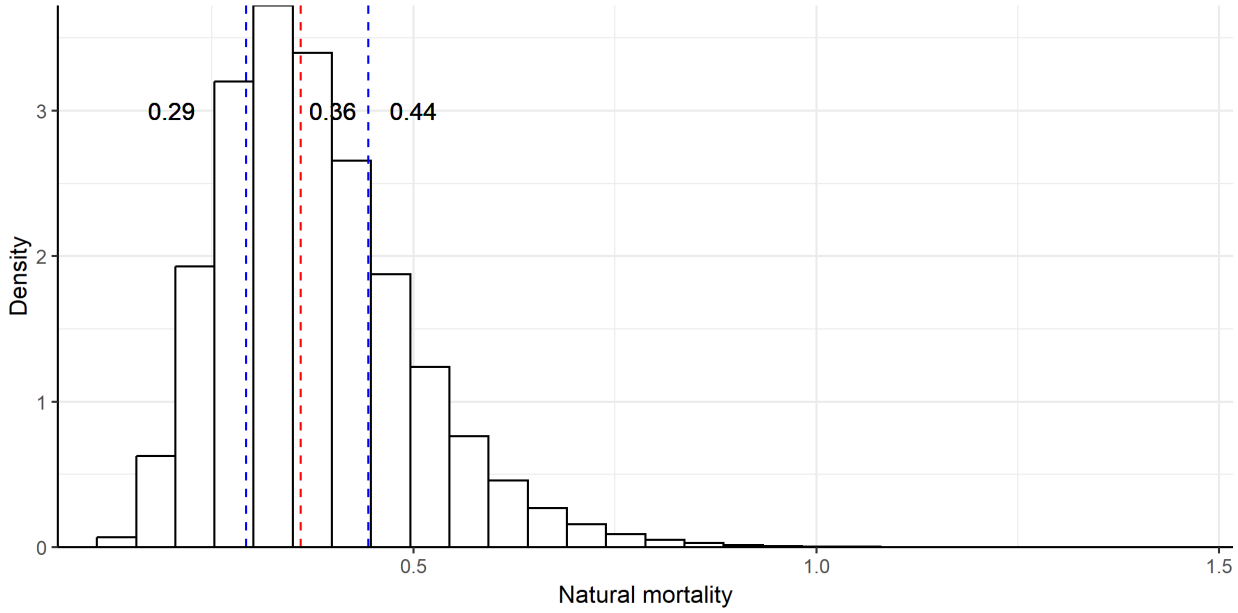

Figure 1. The distribution of the estimated natural mortality based on the Hammel and Cope (2022) approach and the values corresponding to the 50% confidence interval of M.

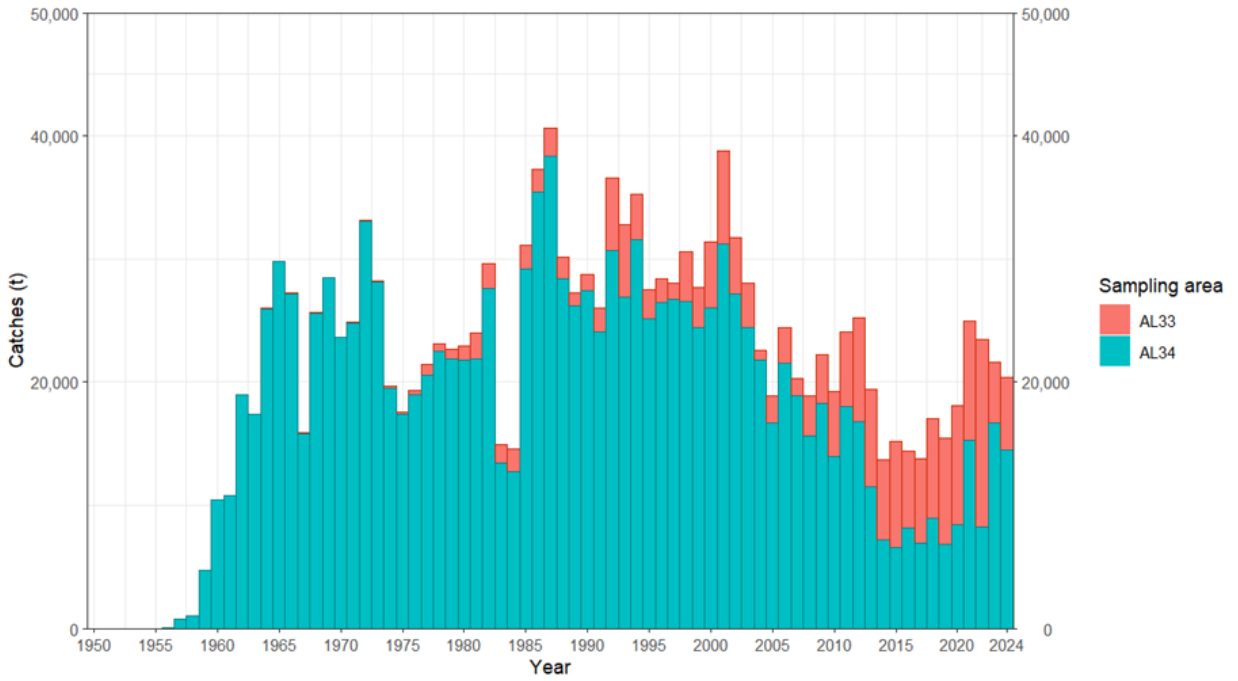

Figure 2. Total Task 1 catches (t) of southern albacore by year and sampling area.

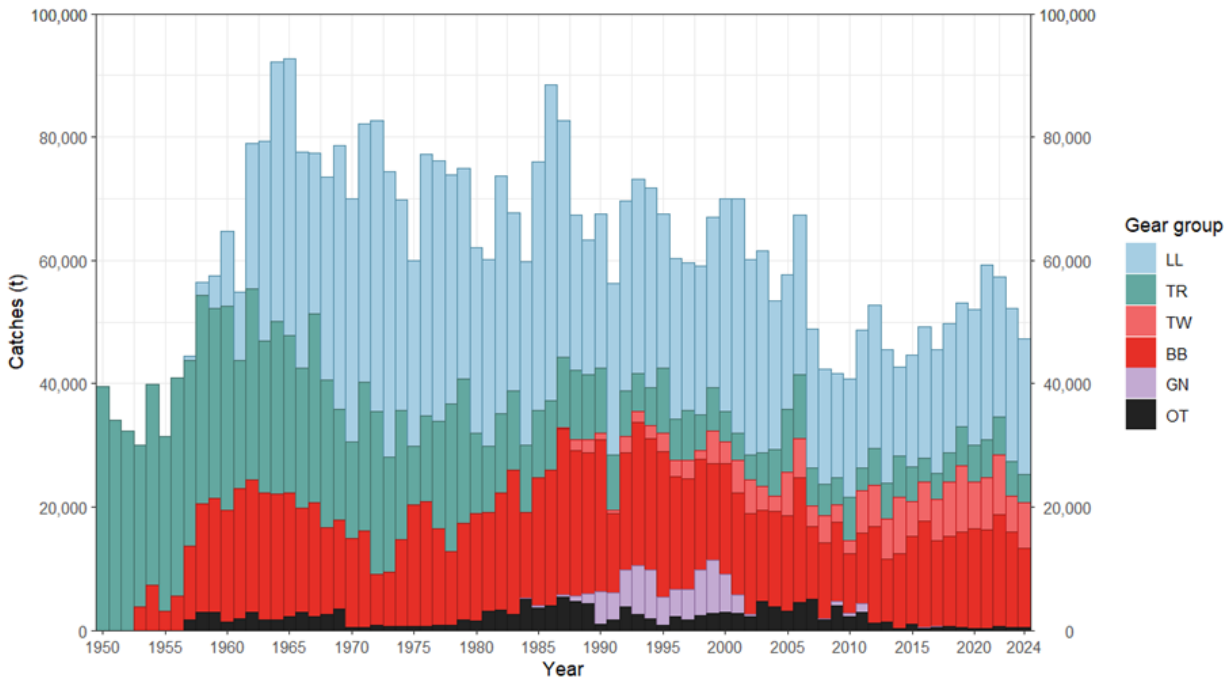

Figure 3. Total Task 1 catches (t) of southern albacore by year and major gear.

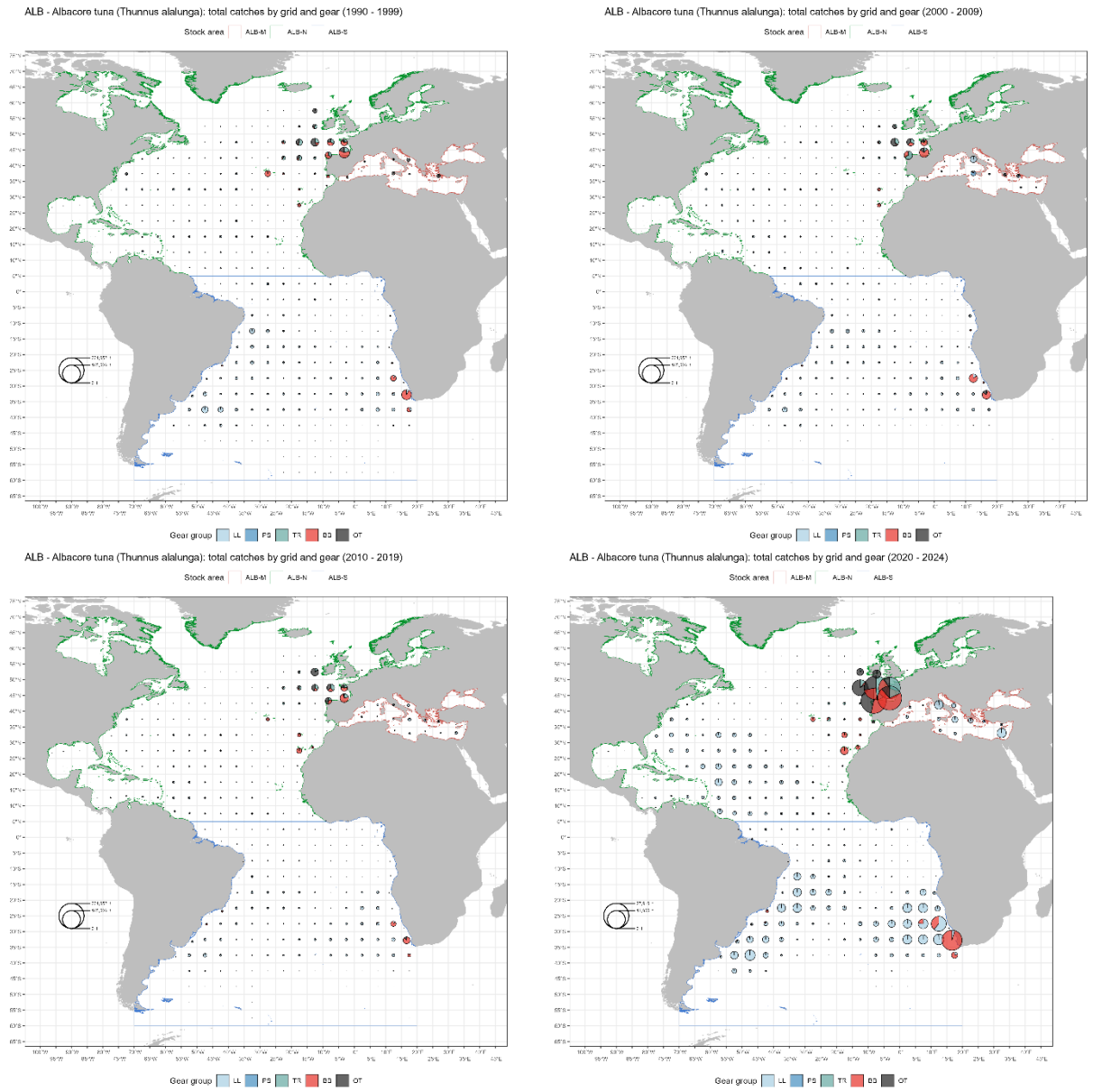

Figure 4. Geographical distribution of albacore catches (landings+dead discards) by major gear and decade (1990 to 2024). For the first three decades the maps are scaled to the maximum catch observed during each decade. The last decade has an independent scale with only five years (2020 to 2024).

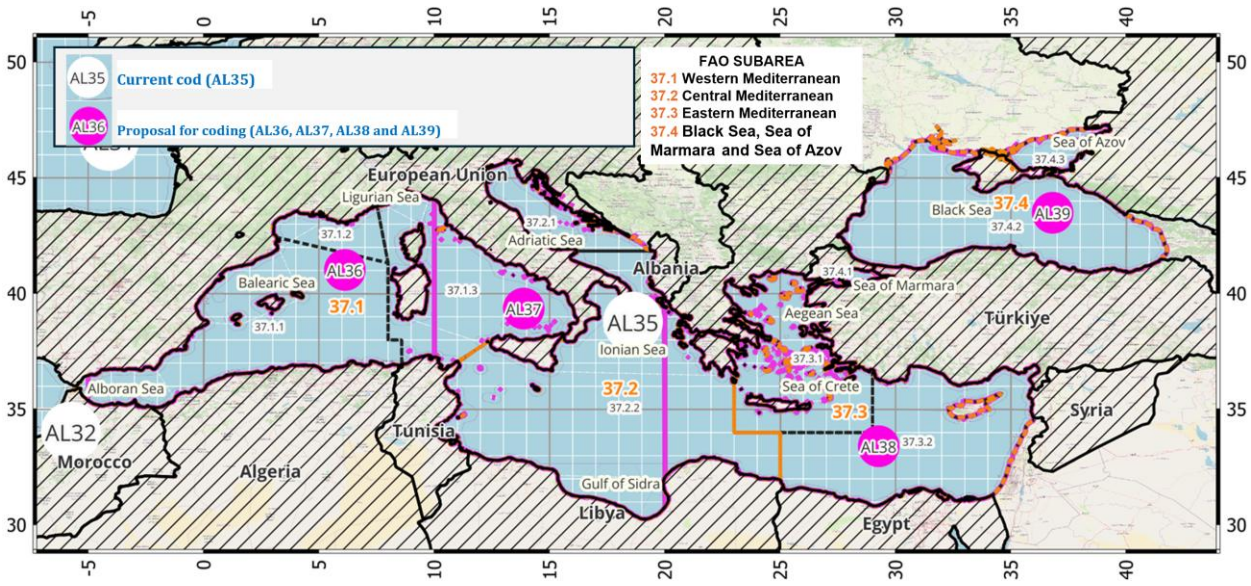

Figure 5. Proposed subdivision of sampling areas in the Mediterranean.

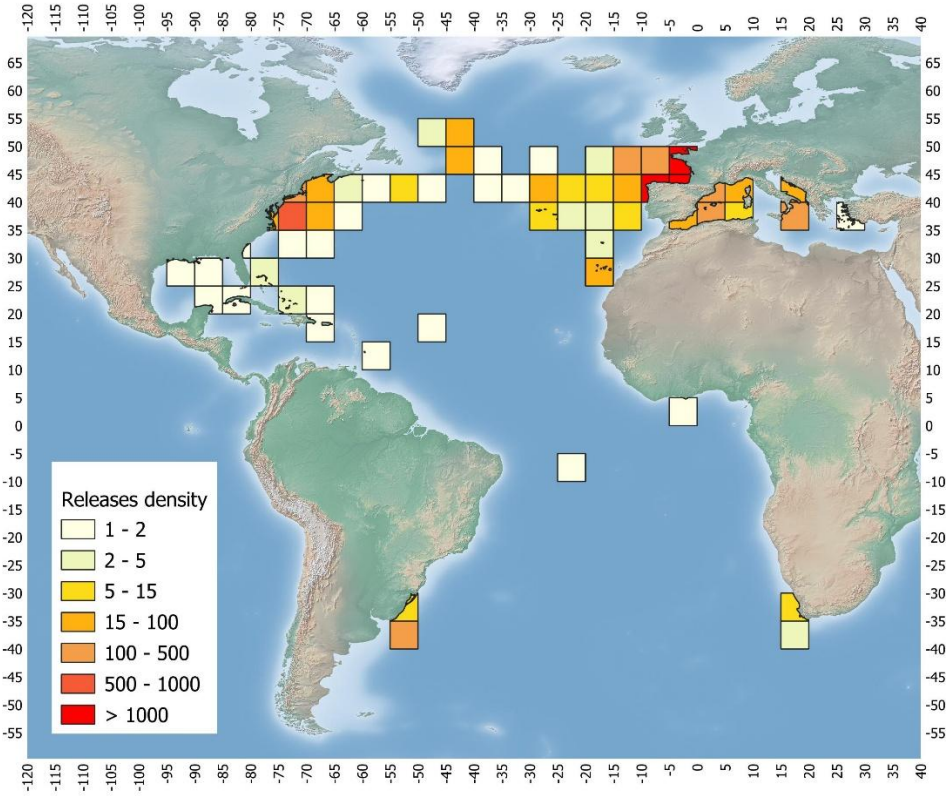

Figure 6. Density of albacore conventional tags released in a 5°x5° square grid, in the ICCAT area.

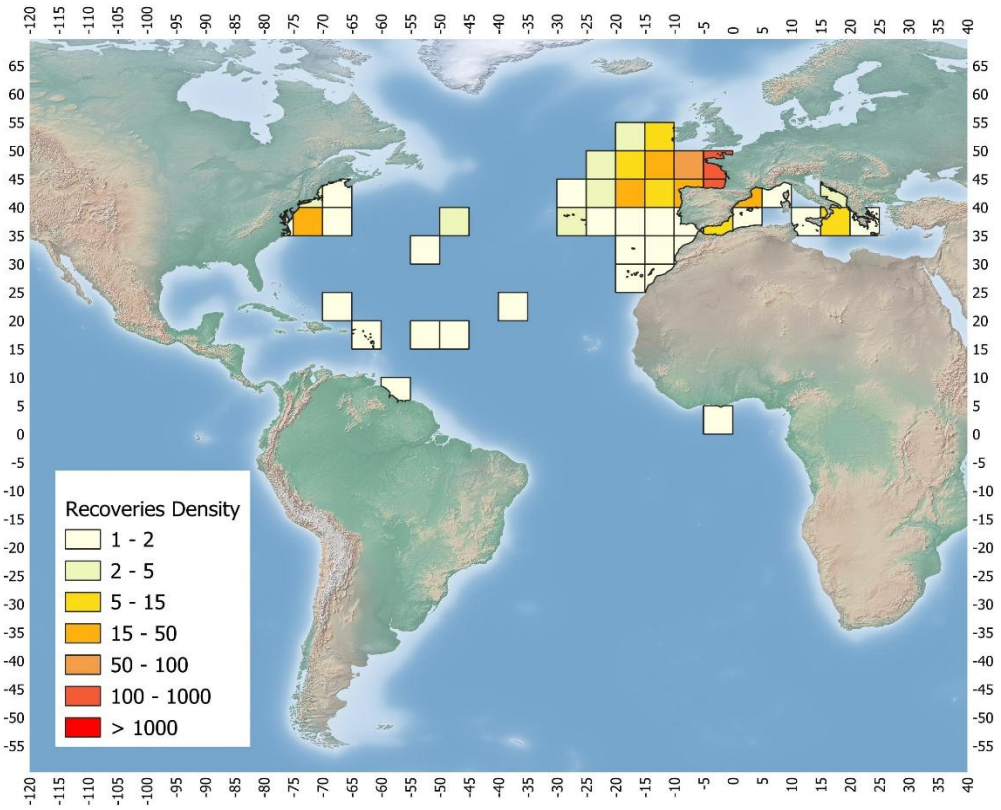

Figure 7. Density of albacore conventional tags recovered in a 5°x5° square grid, in the ICCAT area.

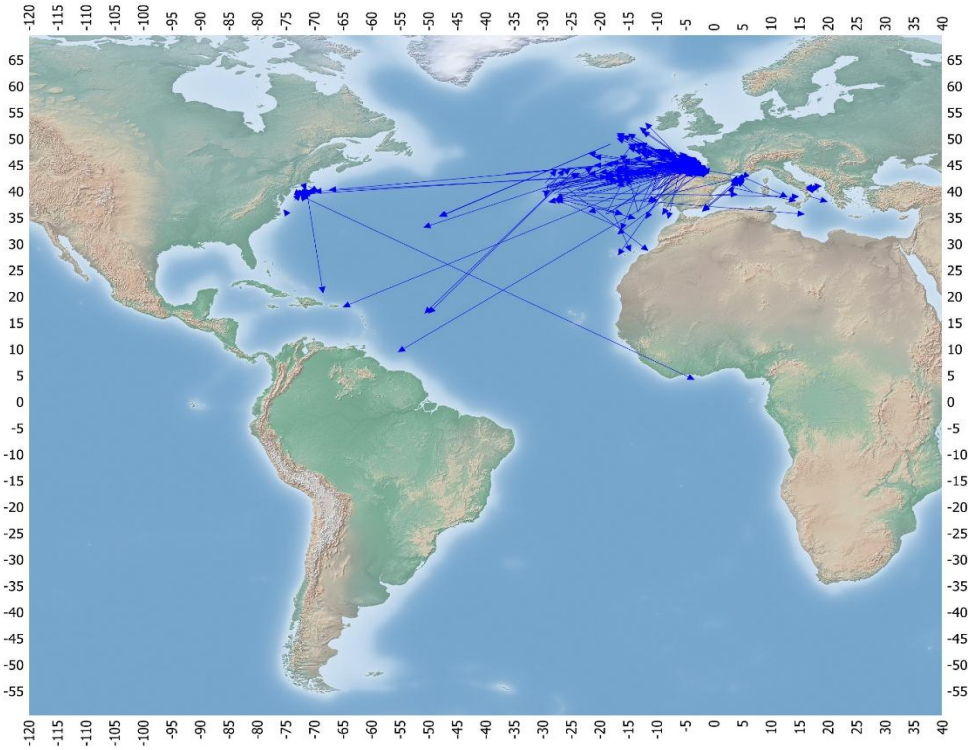

Figure 8. Apparent movement (arrows: release to recovery location) of the albacore conventional tagging.

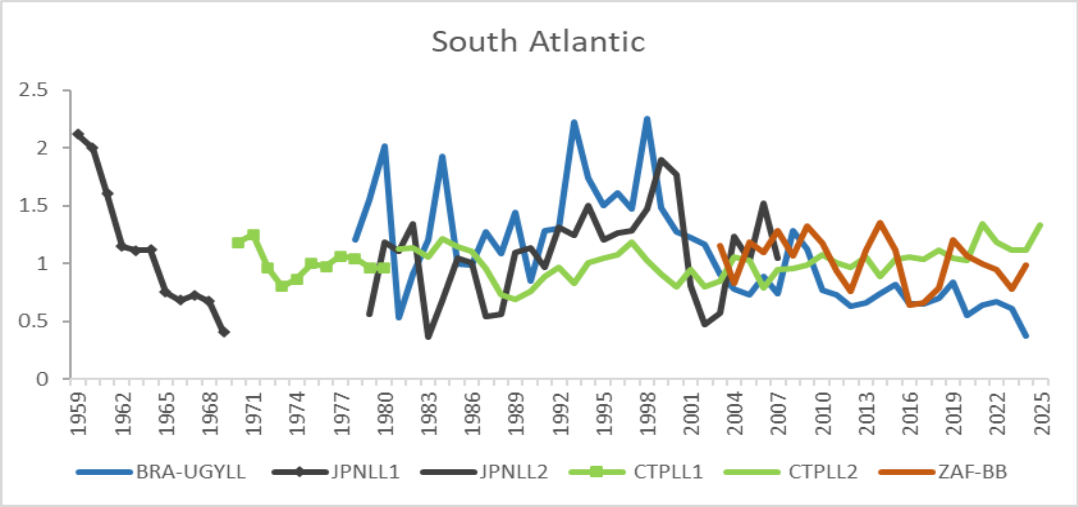

Figure 9. South Atlantic albacore indices of abundance considered for the stock assessment in 2026. See section 4.1 for further details.

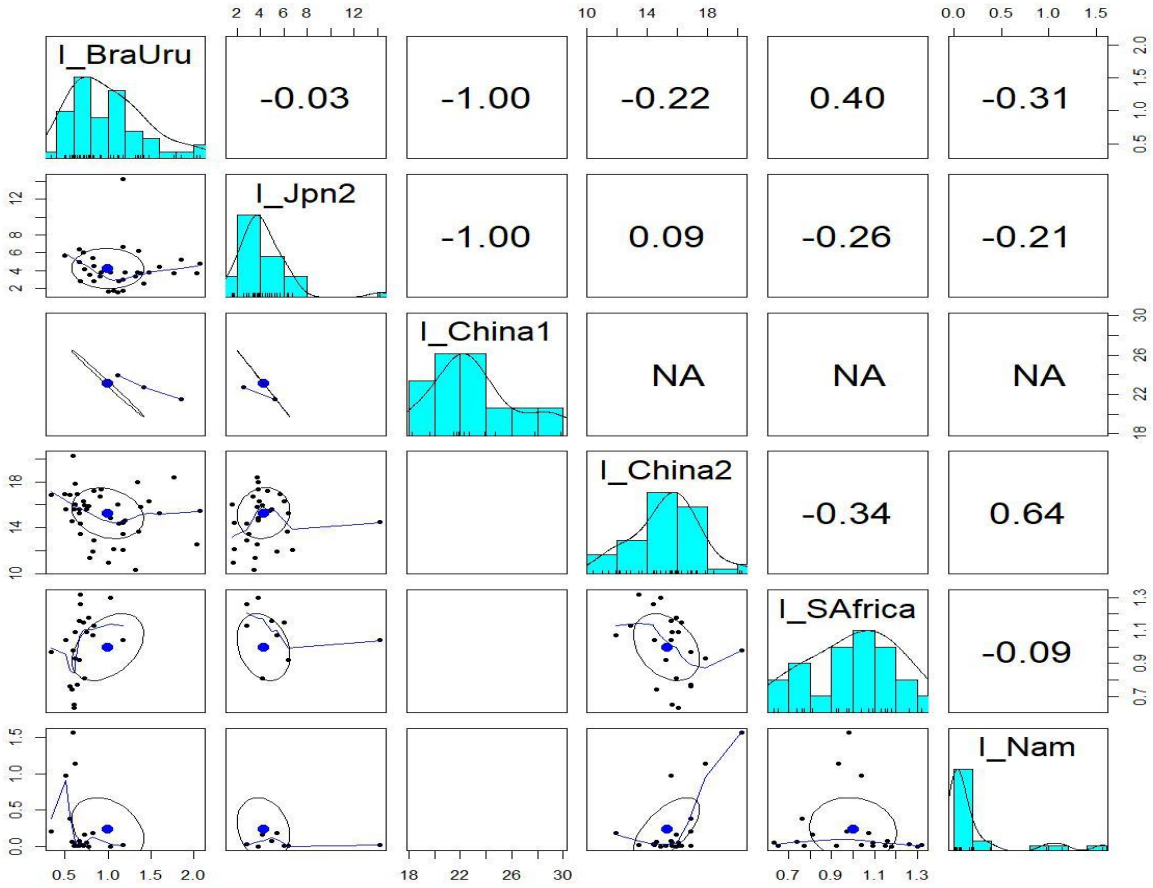

Figure 10. Plot of correlation analysis (Pearson correlation) among the available South Atlantic albacore CPUEs. Points indicate the CPUE value common between index by year, the ellipse line indicates the correlation trend, and the solid line is a smoother function to help identify trend of correlation (see **Table 10** for index information).

Appendix 1

Tentative Agenda

1. Opening, adoption of Agenda and meeting arrangements

2. Review of historical and new information on biology

3. Review of fishery statistics/indicators

   3.1 Task 1 catches data
   3.2 Task 2 catch/effort
   3.3 Task 2 size data
   3.4 Task tagging data

4. Review of available indices of relative abundance by fleet

   4.1 Southern stock (for SS3)
   4.2 Northern stock (for MP)

5. Assessment models (South): specifications of data inputs and modeling options

6. Management Strategy Evaluation (MSE) South

   6.1 Operating models
   6.2 Performance indicators

7. Management Strategy Evaluation (MSE) North:

   7.1 Alternative MP results
   7.2 Exceptional Circumstances based on catch and CPUE updates

8. Atlantic Albacore tuna Year Programme (ALBYP): achievements and programed activities for North, South and Mediterranean stocks

9. Recommendations on research and statistics

10. Other matters

    10.1 Use of funds and status of 2026 research funding
    10.2 Intersessional workplan
    10.3 Responses to the Commission

11. Adoption of the report and closure

Appendix 2

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Appendix 3

List of papers and presentations

DocRef	Title	Authors
SCRS/2026/032	Bomb 14C dating, age estimate refinement, and growth characteristics using otoliths of North Atlantic albacore (*Thunnus alalunga*)	See I., Andrews A.H., Krusic-Golub K., Haghipour N., Allman R.J., Orbesen E., Snodgrass E., Pacicco A., Quelle Eijo P., Ortiz de Zárate V., Golet W.J.
SCRS/2026/037	Standardized catch per unit effort of albacore (*Thunnus alalunga*) from the Spanish baitboat fleet for the period: 1981-2025 in the Northeast Atlantic	Quelle P., Jaranay M., Carmona I., Ortiz M.
SCRS/2026/058	Preliminary Evaluation of Candidate Management Procedures for North Atlantic Albacore.	Urtizberea A., Correa G.M., Merino G., Arrizabalaga H.
SCRS/2026/062	Temporal trends in standardized CPUE of South Atlantic albacore (*Thunnus alalunga*) from Brazilian and Uruguayan longline fisheries (1978-2024)	Mourato B., Forselledo R., Jiménez S., Kikuchi E., Mas F., Cardoso L.G., R. Sant'Ana
SCRS/2026/064	Regional abundance index for albacore tuna caught in the Chinese Taipei longline fisheries in the North Atlantic	Su N-J., Sung Y.F.
SCRS/2026/065	CPUE standardization for albacore tuna (*Thunnus alalunga*) caught in the Chinese Taipei longline fishery in the South Atlantic	Su N-J., Sung Y.F.
SCRS/2026/066	Analyse des structures de tailles du germon (*Thunnus alalunga*) provenant de la pêche palangrière en Algerie	Rouidi S., Mennad M.
SCRS/2026/068	Environmental effects on the standardization of albacore (*Thunnus alalunga*) abundance index in the Gulf of Hammamet and adjacent Mediterranea Sea (2024-2025)	Hajjej G., Hanke A., Sosthene A.
SCRS/2026/069	Standardization of CPUE for albacore tuna (*Thunnus alalunga*) in the Namibian pelagic longline fishery (2004-2024)	Jagger C.E., Paulus S.C.
SCRS/2026/071	CPUE Standardization of albacore (*Thunnus alalunga*) caught by the South African tuna-pole-line (baitboat) fleet for the time series 2003-2024	West W.M., Kerwath S.E.
SCRS/2026/072	Standardized CPUE for South Atlantic albacore by Japanese longline fishery from 1979 to 2025	Matsubara N., Aoki Y.
SCRS/2026/073	Standardized CPUE for North Atlantic albacore by the Japanese longline fishery from 1975 to 2025 as bycatch period	Matsubara N., Aoki Y.
SCRS/2026/075	Standardized indices of albacore, *Thunnus alalunga*, from the United States pelagic longline fishery	Lauretta M.

SCRS/2026/078	Characterizing growth uncertainty in albacore (*Thunnus alalunga*) using a Monte Carlo approach based on literature-derived variability	Mourato B., Kikuchi E.
SCRS/2026/079	North Atlantic albacore tuna reproductive biology study: biological samples collection and analysis	Busawon D.S., Alex Hanke A., Quelle P., Su N.J., Macías D., Puerto M.A., Gomez M.J., Rodríguez E., Borrego-Santos R., Chapela I., Jaranay M., Sánchez C., García B., Gutiérrez O.
SCRS/P/2026/031	Summary of available albacore statistical data	Deprez B.
SCRS/P/2026/032	Summary of available albacore tagging data	García J.
SCRS/P/2026/033	Split the sampling areas in the Mediterranean to replace older T1NC areas	García J.
SCRS/P/2026/034	Update on the biology of Southern Atlantic albacore tuna	Travassos P.
SCRS/P/2026/035	Update on the southern albacore MSE framework	Hordyk A., Mourato B.
SCRS/P/2026/037	Some biological aspects of *Thunnus alalunga*: Growth dynamics and age characterization based on length-frequency data	Saber M., El Haweet, Osman H.
SCRS/P/2026/038	ICCAT Atlantic Albacore tuna Year Programme (ALBYP): Update of research activities on Mediterranean albacore tuna	Anonymous

Appendix 4

SCRS documents and presentation abstracts as provided by the authors

SCRS/2026/032 - A well-established North Atlantic bomb 14C chronology was used to test the validity of age estimates for albacore tuna (*Thunnus alalunga*) in the North Atlantic by comparing 14C values from otoliths of aged fish with the regional reference. Some age estimates were initially offset from the reference 14C chronology. An investigation of daily increments and early length modes - coupled with information from the 14C offsets and otolith mass growth - led to refined age-at-length estimates and an 18-year lifespan that was supported by bomb 14C dating. A limited number of North Atlantic albacore otoliths were available for this study because they have not been routinely collected (n = 54); however, the combined set of specimens (smallest to largest and youngest to oldest otoliths) provided an opportunity to derive new age and growth parameter estimates (L8= 113.5 cm CFL, k= 0.367, t0= –0.767) for the North Atlantic Ocean.

SCRS/2026/037 - Nominal catch of number of fish per unit effort (CPUE) of the North Atlantic albacore (*Thunnus alalunga*) caught by the Spanish baitboat fleet in the Northeastern Atlantic were collected by trip for the period 1981-2025. Standardized index was estimated using the Generalized Linear Random Effects Model (GLMM) with log-normal error distribution. The year*month interaction term and year*zone interaction term were included in the model as random effects to derive the annual standardized catch rates as a relative index of abundance for 1981-2025.

SCRS/2026/058 - In 2017, ICCAT adopted Recommendation 17-04 that contained an interim Harvest Control Rule (HCR) for North Atlantic Albacore (*Thunnus alalunga*). In 2021, this was extended to a fully specified Management Procedure (MP, Recommendation 21-04), including the HCR, the data and specifications to update stock status, and a protocol for exceptional circumstances. The adoption of this management framework was supported by a Management Strategy Evaluation (MSE) process developed between 2013 and 2021. In 2023, a new benchmark stock assessment was developed, and the MSE framework was updated to reflect the new information available on stock biology and fishery data. As part of the work plan to develop the renewed MSE, we address the requests of Panel 2 held in March 2026 in evaluating a suite of candidate MPs under the new MSE framework. This paper describes a set of preliminary candidate management procedures, including two empirical and four model-based CMPs. Using a set of indicators, we compared the MPs' performance. These results will be discussed under the Albacore Data Preparatory Meeting in April 2026.

SCRS/2026/062 - In this study, catch and effort data from Brazilian and Uruguayan pelagic longline fisheries operating between 1978 and 2024 were analyzed to develop a standardized CPUE index for albacore (*Thunnus alalunga*) in the South Atlantic. CPUE standardization was performed using a Delta-lognormal Generalized Linear Model, incorporating temporal (year–quarter), spatial (5°×5° cells), operational (number of hooks), and targeting-related (cluster) covariates, as well as vessel identity to account for differences in catchability among vessels. The standardized index shows higher catch rates during the mid-1990s, followed by a decline in the early 2000s, a period of relative stability during the mid-2000s and early 2010s, and lower values in recent years. Deviance analysis indicates that both temporal effects and vessel identity are among the main drivers of variability in catch rates, while cluster effects also contribute to explaining differences associated with fishing strategies. The extended time series and the inclusion of additional data sources improve the representation of fishing activity in the region. These results provide a consistent and updated CPUE index to support future stock assessment analyses for albacore in the South Atlantic.

SCRS/2026/064 - Catch and effort data of albacore tuna (*Thunnus alalunga*) were standardized for the Chinese Taipei tuna longline fishery in the North Atlantic Ocean using a generalized linear model (GLM). The recent period from 1999 to 2025 was considered in the CPUE (catch per unit of effort) standardization for albacore, which potentially takes the issue of historical change in targeting for this fishery into account. Regionally based abundance indices of albacore separated at 30ºN were developed using data in recent years, which showed different trends to those from the other region. The standardized CPUE of albacore in the south of the North Atlantic Ocean started to increase slightly from the late 1999 until 2014 and then decreased to a relatively stable level during 2015-2025. However, the trend for the northern North Atlantic Ocean remains relatively consistent over the past decade, with a slightly increasing trend during 1999-2014.

SCRS/2026/065 - Catch and effort data of albacore tuna (*Thunnus alalunga*) were standardized for the Chinese Taipei distant-water tuna longline fishery in the South Atlantic Ocean using a generalized linear model (GLM). Three periods of whole period 1967-2025, 1981-2025 (with cluster analysis to inform targeting) and 1998-2025 (with information on operation type, i.e., number of hooks between floats, HBF, which were available from 1995) were considered in the standardization of albacore CPUE (catch per unit effort) to address the issue of historical change in targeting in this fishery. Standardized CPUE of albacore developed by period showed almost identical trends to those derived from the model of entire period. Results were insensitive to the inclusion of cluster analysis results or gear configuration (HBF) in the model as an explanatory variable. The trends of abundance indices for South Atlantic albacore started to decrease in the 1970s but showed a relative peak in the late 1990s and then decreased. The trend remained slightly increasing from the early 2000s until recent years to 2025.

SCRS/2026/066 - This document presents an analysis of the size composition of catches based on a sample of 64 albacore tuna (*Thunnus alalunga*) collected in 2025 from longline fisheries along the central and eastern coasts of Algeria. The estimated mean fork length was 77.73 cm, with moderate variability and most individuals ranging between 65 and 90 cm. The size distribution was slightly skewed toward smaller individuals but was dominated by fish close to or above sexual maturity. The mean weight was 8.92 kg, and the length–weight relationship followed a positive allometric model (b = 3.30). These results differ from the ICCAT Mediterranean reference, suggesting variability potentially associated with sampling characteristics and environmental conditions.

SCRS/2026/068 - To support fishery management for albacore tuna (*Thunnus alalunga*) in the Gulf of Hammamet and Mediterranean Sea, this study standardized catch-and-effort data (2024-2025) using Generalized Additive Models and spatial distribution models. Variability in Catch Per Unit Effort (CPUE) was primarily driven by environmental and operational factors rather than fluctuations in stock biomass. Depth was the strongest predictor of catch rates, followed by swordfish catch and Sea Surface Salinity. A spatial model did not significantly improve results, suggesting that the incorporated environmental covariates accounted for most of the spatial variation in catchability across the fishing grounds. Since raw CPUE does not directly reflect population trends, management should prioritize monitoring environmental and operational shifts to ensure sustainable extraction levels and accurate quota assessments.

SCRS/2026/069 - Catch per unit effort (CPUE) standardization was conducted for albacore tuna (*Thunnus alalunga*) in the Namibian pelagic longline fishery over the period 2004-2024. A delta-generalized additive modelling (delta-GAM) framework was applied to account for zero-inflated and positively skewed catch data. CPUE (tons per hook) was modelled using a two-part approach: a binomial model to estimate encounter probability and a Gaussian model fitted to log-transformed positive CPUE values. Explanatory variables included year, month, fishing area, and spatial smooths of latitude and longitude. Model predictions were combined to derive an annual standardized CPUE index of relative abundance. The index showed a general decline from 2004 to 2008, a pronounced low during 2015-2018, and a marked increase around 2020-2021, followed by recent stabilization. Seasonal and spatial effects were significant in both model components, with a stronger fit observed for the positive CPUE model. This study represents the first CPUE standardization for the Namibian pelagic longline fleet and demonstrates the suitability of the delta-GAM approach. The standardized index provides a robust input for regional stock assessments ICCAT.

SCRS/2026/071 - A standardised CPUE index for albacore (*Thunnus alalunga*) is presented, derived from the South African tuna pole-line (baitboat) fleet, between 2003 and 2024. A Tweedie generalised additive mixed model (GAMM) was used to account for zero inflation in the catch data. Covariates included year, month, fishing tactic (derived from clustering), and a two-dimensional spatial smoother representing the spatial distribution of fishing effort, with vessel included as a random effect to account for vessel-specific differences in catchability. Model selection was via the Akaike Information Criterion (AIC). A marginal prediction with spatial averaging approach was used to derive the standardised year index, isolating the year effect from the influence of operational and spatiotemporal covariates. Residual diagnostics indicated that the model struggled with extreme catches. The standardized CPUE mostly trails the nominal CPUE with no overall significant upward or downward trends. The analyses indicate that the CPUE for the South African baitboat fishery for albacore has been stable over the last decade. South Africa's baitboat CPUE index may reflect local availability, or its consistent seasonal habitat contains genuine signal on stock-wide abundance trends.

SCRS/2026/072 - This document provides Japanese longline CPUE for South Atlantic albacore, presenting only CPUE for the bycatch period. Since around 2010, both the proportion and total catch of albacore have increased markedly. Interview and catch distribution patterns suggest that this increase is partly driven by opportunistic targeting of albacore by a subset of vessels and increasing spatial concentration of fishing effort. To account for these changes, a new standardized CPUE index for South Atlantic albacore was developed using unaggregated Japanese longline logbook data. CPUE standardization was conducted within a spatial–temporal framework implemented in sdmTMB. The models incorporated vessel effects, a spline effect for hook-between-floats, and spatial and spatiotemporal random effects represented by a triangulated spatial mesh. The standardized CPUE was calculated successfully. Model diagnostics showed improved residual behavior and adequate representation of spatial dependence. The new CPUE index better accounts for recent changes in fishing behavior and provides a more reasonable abundance index for South Atlantic albacore stock assessment.

SCRS/2026/073 - This document provides a simplified update of longline CPUE for North Atlantic albacore, presenting only CPUE for the bycatch period for which data have been updated. To calculate the updated standardized CPUE, logbook data from 1975–2025 were used, applying the same methodology as in the previous CPUE submission. The calculated CPUE shows a relatively high trend over the most recent three years (2023–2025) compared with the past ten years (2016– 2025).

SCRS/2026/075 - Catch and effort data from the United States pelagic longline fishery operating in the North Atlantic Ocean were analyzed to estimate indices of albacore relative abundance. The standardized annual abundance index was strictly updated for the management procedure; however, the modelling platform was modified from SAS to R, with no change in the standardization GLM structure. Comparison between platforms showed no considerable difference in the estimated index.

SCRS/2026/078 - An empirical Monte Carlo approach was applied to characterize uncertainty in growth parameters of albacore (*Thunnus alalunga*) using variability derived from published studies. Growth parameters ($L\infty$, k, t_0) were compiled from the literature, retaining only studies reporting all three parameters. Subsets were defined for specific analyses (e.g. Atlantic-only or global datasets). To ensure approximate normality and biological consistency, $L\infty$ and k were log-transformed, while t_0 remained on its original scale. A multivariate normal distribution was then fitted to the transformed parameters using empirical means and covariance, preserving observed correlations among parameters, particularly the inverse relationship between $L\infty$ and k. A total of 1,000 parameter sets were simulated and back transformed. Simulated values were filtered using biological constraints to exclude unrealistic combinations. Growth trajectories were generated using the von Bertalanffy growth function, producing an ensemble of plausible growth curves. Summary statistics were calculated at each age, including means, medians, standard deviations, interquartile ranges, and 95% intervals. Additional outputs included derived length-at-age distributions and estimates of length at age 15, providing a quantitative characterization of growth uncertainty for use in assessment models.

SCRS/2026/079 - This study was focused on the reproductive biology and maturity of North Atlantic albacore (*Thunnus alalunga*) under the ICCAT Atlantic Albacore tuna Year Programme (ALBYP). From 2019 to 2025, 649 fish were sampled from commercial fleets of Chinese Taipei, Venezuela, and Spain. Gonads from 561 fish were analysed histologically, and dorsal spines from 466 fish were used for age determination. Additional sampling in the Bay of Biscay in 2025 improved the representation of juvenile and immature fish. Reproductive activity occurred mainly from April to September, with peak spawning during summer between 15°N and 25°N. Estimated length at 50% maturity (L50) was 73.2 cm for females, 80.0 cm for males, and 75.6 cm for sexes combined. Age at 50% maturity (A50) was 3.9 years for females, 4.7 years for males, and 4.2 years overall. Ninety percent of fish were mature by 86.3 cm and 5.1 years. These results indicate earlier maturation than previously reported for this stock and provide updated biological parameters for stock assessment and management.

SCRS/P/2026/031 – This document provides a synthesis of available statistical data for albacore (*Thunnus alalunga*) to support ICCAT stock assessment and management processes. It compiles key data streams, including Task 1 nominal catches (T1NC), Task 2 catch, effort, and size data (T2CE, T2SZ, T2CS), tagging information, and integrated catalogues of data availability. Spatial coverage encompasses all major albacore

stocks (North and South Atlantic and Mediterranean), with data structured across standardized sampling areas. Historical catch trends indicate peak exploitation between the 1960s and 1990s, followed by a general decline and stabilization at lower levels in recent decades. Catches are dominated by the North and South Atlantic stocks, while Mediterranean contributions remain minor. Fishing activity is primarily associated with longline and baitboat gears, with limited recent contributions from other gears and a marked reduction in unclassified catches. Fleet contributions are concentrated, with a small number of countries accounting for the majority of reported catches. Data products such as CATDIS provide spatially resolved estimates, while catalogue diagnostics highlight variability in data completeness across fleets, gears, and time periods, with implications for assessment quality.

SCRS/P/2026/032 – This document summarizes the status and spatial distribution of albacore tagging data available to ICCAT, including both conventional and electronic tagging programs. Conventional tagging data comprise over 21,000 releases and 723 recoveries, with strong spatial concentration in the North Atlantic (particularly sampling area AL31), reflecting historical tagging effort and fishery overlap. Recovery patterns broadly mirror release distributions but remain limited relative to total releases, indicating low overall recapture rates. Electronic tagging programs, including archival and pop-up satellite tags, provide complementary information on movement and behaviour. A total of 271 electronic tags (ETAG) has been deployed across North (270) and South (1) Atlantic stocks, with variable recovery and reporting rates depending on tag type. Archival internal tags show relatively low recovery rates, although they have increased significantly in the last two years while pop-up tags demonstrate higher reporting success due to autonomous data transmission. Temporal trends indicate increasing deployment in recent years, though recoveries remain uneven. The document also highlights available data access pathways, including ICCAT databases, dashboards, and statistical bulletins, supporting integration of tagging data into stock assessment and movement analyses.

SCRS/P/2026/033 – This document proposes a revision of ICCAT Mediterranean Task 1 (T1NC) statistical areas to improve spatial resolution and alignment with ecological and fisheries processes. Current T1NC areas lack clear geographical definitions and are too coarse to support detailed analyses, limiting their utility for assessment and management. The proposal introduces a subdivision of the Mediterranean into smaller, well-defined sampling areas (e.g., Adriatic, Ionian, Ligurian, and Strait of Sicily), consistent with existing ICCAT sampling frameworks and more closely aligned with FAO/GFCM regional classifications. Historical data analysis (1950–2020) shows that catches were previously aggregated under broad categories, masking spatial heterogeneity in fishing activity. The revised coding structure enables disaggregation while maintaining compatibility with historical time series. Trade-offs between spatial resolutions are explicitly considered: finer grids (e.g., 1×1) improve ecological representation and analytical precision but increase reporting burden and complexity, whereas coarser grids (e.g., 5×5) maintain continuity and simplicity. Overall, the proposal aims to enhance data quality, analytical capability, and consistency across datasets, supporting improved stock assessment and management in the Mediterranean.

SCRS/P/2026/034 - An update on the biology of Southern Atlantic albacore (SCRS/P/2026/034) tested the age and growth estimations of *Thunnus alalunga* by comparing otoliths and dorsal spine sections. Both calcified structures were difficult to interpret, with around 30% of individuals without age estimation. Otoliths consistently presented higher numbers of growth marks compared to spines. Spines systematically underestimated age, with mean differences of approximately 2.40 ±1.8 marks. This bias resulted in overestimated growth coefficients (K, von Bertalanffy growth function VBGF) and artificially faster growth trajectories. Asymptotic fork length (FL∞, VBGF, at 105 cm) was similar between structures, indicating that the main effect is on growth rate. Applying a correction of +2 marks to the spine data brought similar VBGF parameters compared to otoliths, whereas a correction of +3 points produced a less accurate pattern. It confirmed a possible bias when estimating the growth using spine readings, due to tissue resorption in the centre with the age. Thus, corrected spine readings (+2) represent a reliable alternative when otoliths are unavailable, contributing to more robust stock assessments.

SCRS/P/2026/035 - This document provides an update on the development of the Management Strategy Evaluation (MSE) framework for Southern Atlantic albacore, outlining methodological choices, current progress, and a detailed workplan through 2027. Building on earlier work, operating models (OMs) are

conditioned using Stock Synthesis (SS3) with data updated to 2024, incorporating key uncertainties in natural mortality and steepness through both discrete grids and stochastic sampling approaches. The framework distinguishes between reference OMs, representing data-supported uncertainty, and robustness OMs used for stress testing alternative scenarios. Candidate management procedures (CMPs) include empirical and model-based approaches, such as index-based rules and surplus production models targeting FMSY or reduced fishing mortality. Preliminary results illustrate historical depletion followed by partial recovery, with projections showing varying rebuilding trajectories and catch outcomes across CMPs. The proposed timeline includes finalizing OMs and CMPs, running simulations, and presenting results to SCRS and the Commission, with the aim of adopting a management procedure by 2027 and implementing TAC advice from 2028 onward. Supporting infrastructure includes a public GitHub repository and online technical documentation.

SCRS/P/2026/037 - Not provided by the authors.

SCRS/P/2026/038 - Not provided by the authors.