



SOUTH EAST ATLANTIC FISHERIES ORGANISATION

REPORT OF THE 19TH ANNUAL MEETING OF THE SCIENTIFIC COMMITTEE - 2023

20-23 November 2023

Virtual

**Secretariat Office, Swakopmund
NAMIBIA**



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Mr. Granville LOUW (South Africa)

Chairperson of SEAFO Scientific Committee

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1. Opening of meeting by the Chairperson

The 19th Annual Meeting of the SEAFO Scientific Committee (SC) was convened from 20 to 23 November 2023 virtually via the Zoom platform (21 delegates) with two delegates from Namibia attending the meeting in person at the SEAFO Secretariat Office in Swakopmund, Namibia.

The Chairperson, Mr Granville Louw from South Africa, opened the meeting and emphasized that it would be a discussion of scientific issues and that all delegates were expected to express their scientific views so that issues are resolved, and the best possible advice forwarded to the Commission.

2. Appointment of Rapporteur

Mr. Erich Maletzky was appointed as rapporteur for the 19th SEAFO Scientific Committee meeting.

3. Adoption of agenda and meeting arrangements

No amendments were proposed by meeting participants and thus SC adopted the agenda in its original form ([DOC/SC/01/2023/Rev1 \(15 Nov 2023\)](#)) ([Appendix I](#)).

Members were informed of the practical arrangements for the meeting by the Executive Secretary.

4. Introduction and Admission of Observers

Six observers joined the meeting – contact details listed under the “Observers” section of [Appendix II](#).

- Dr. Megan Tierney: Vice-convenor of the ACAP Seabird Bycatch Working Group.
- Ms. Eszter Hidas: Manager/Technical Advisor - Common Oceans Program, Deep-Sea Fisheries Project (FAO), General Fisheries Commission for the Mediterranean of the FAO.
- Dr. Anthony Thompson: DSF Consultant - Common Oceans Program, Deep-Sea Fisheries Project (FAO).
- Dr. Bjørn Erik Axelsen, MRI Norway.
- Dr. Marco Milardi: Science Officer, SIOFA Secretariat.
- Dr. Romina Henriques: Senior Lecturer University of Pretoria.

5. Introduction of Delegations

The Heads of Delegations introduced their delegations. A total of 15 Scientific Committee members attended the 19th SEAFO SC meeting (see [Appendix II](#) for list of participants). No members from the Republic of Korea attended the meeting.

6. Review of submitted SEAFO working documents and any related presentations, allocation to the agenda items.

Twelve documents were submitted to the Scientific Committee for review and were considered during the 19th SEAFO SC meeting ([DOC/SC/00/2023/Rev1 \(14 Nov 2023\)](#)) ([Appendix I](#)).

7. Review of the 2023 work program.

The work program for 2023 was discussed and covered the following areas of work:

7.1 Finalization of Orange roughy genetic analysis

Dr. Romina Henriques from the University of Pretoria, who is leading the genetic analysis, reported back on the preliminary results of the study. The objective of the study is to use genomic information to assess population structure and connectivity patterns of orange roughy in the south-eastern Atlantic. Biological samples, comprising fin clippings and muscle tissue, were obtained from the SEAFO Convention Area, Namibia and South Africa over the period 2018 and 2022. Three DNA extraction methods (*viz.* e.z.n.a DNA tissue extraction kit (OmegaTek), CTAB and modified CTAB) were employed to optimize DNA extraction quality and quantity as required by the sequencing provider LGC Genomics (Germany). A total of 225 DNA extraction reactions were performed, with additional 16 re-precipitation reactions conducted to achieve good quality samples. After quality control, 127 samples were sent away for DNA sequencing.

Preliminary statistical analyses revealed subtle levels of population structure, particularly between SEAFO CA, Namibia and South Africa. Further analyses will be conducted during 2024 to estimate genetic diversity; population structure and connectivity patterns; the possibility of isolation by distance; and of local adaptation.

The ES reported that the existing budget was overspent by NAD 12,696.40 mainly because of the exchange rate fluctuation.

7.2 South Africa to continue with the Orange roughy data (catch depths & length frequencies) analysis for catches recorded in the EEZ.

Pending the genetics analysis results SC agreed to keep this item on the SC Work Programme until 2024 when work on this item can be finalized.

7.3 Updating the Observer and Captain's logbook forms to capture tag and recapture information for Patagonian toothfish.

In 2022 it was agreed that a tagging programme would be implemented on the commercial fleet targeting Patagonian toothfish in the SEAFO CA (for the

purposes of defining the home ranges of the SEAFO stock, and assessing the potential connectivity with adjacent area such as the South African EEZ and CCAMLR). The Executive Secretary noted that following this decision both the Observer and Captain's Logbooks have been updated at the start of 2023 (for collecting tagging and recapture data). As per the agreement taken in 2022 the updated logbooks now allow for the tag-and-release of a single fish for every whole weight tonne of Patagonian toothfish caught by the commercial fleet.

7.4 Finalization of standardised SEAFO SC maps and intersessional workshop

Mr. Maletzky updated the SC on the status of the standardized maps and noted that a technical limitation was discovered with the R Script during the demonstration given to SC in 2022. The limitation pertains to the memory (RAM) usage of the R Script which inhibits the successful execution/completion of the script on certain computers running the Microsoft Windows Operating System. Mr. Maletzky emphasized that this is a problem considering that one of the objectives of the map standardization exercise was to ensure any SC member would be able to create interactive and static maps for any (target or bycatch) species fished within the SEAFO CA.

Mr. Maletzky further noted that a number of recommended solutions (e.g. increasing the temporary memory allocation for the active R Session by way of the `"memory.size()"` and `"memory.limit()"` functions [now deprecated]; and breaking up computationally intensive code logic into smaller sequential chunks that are spread across memory reclamation steps, etc.) have already been applied with zero success to date.

SC discussed possible options to resolve the problem (such as reducing the bathymetry data used in the base map), and agreed that this work be carried over to the 2024 SC Work Plan.

7.5 Continue the investigation on the different approaches for quantifying abundance of VMEs from video and image data for drafting guidelines for the SEAFO CA.

The ES reported that a paper was published on 10 October 2023 with the title of: "[Towards a scientific community consensus on designating Vulnerable Marine Ecosystems from imagery](https://peerj.com/articles/16024/)" (<https://peerj.com/articles/16024/>). The SC took note of the published work and also discussed work done by the South Pacific Regional Fisheries Management Organisation (SPRFMO) in the same field of work. SC noted that the scope of work to be undertaken is quite considerable and may require a dedicated team (with the required expertise) to deliver on this item. For this reason SC is investigating all available options for quantifying VMEs from underwater video imagery.

7.6 Update the relevant SEAFO documents (and database) to incorporate the new FAO/ASFIS codes on four Chaceon species, as well as the scientific name for Pelagic armourhead.

The Executive Secretary noted that following the agreement of the 2022 SC and Commission meetings the species codes for the affected species have all been updated in the relevant documents (e.g., Observer and Captain's logbooks).

7.7 Obtain more information on the location and timing of spawning aggregations for Orange roughy in the SEAFO CA based on historical data.

The ES and Mr. Endjambi discussed this matter and the ES reported back to the meeting (in the absence of Mr. Endjambi) in noting that more time is required for the aforementioned analysis and that feedback will be given during the 2024 SC meeting.

7.8 Standardize the CPUE series for key SEAFO commercial fish species for use in stock assessment.

For Patagonian toothfish SC noted that the data are very sparse for the two gear types used in the SEAFO Fishery which presented a problem with the CPUE standardization. It was further noted that the standardization of the Patagonian toothfish CPUE was attempted five times in the past – with all these attempts producing unsatisfactory results (i.e., correlation coefficient of <30%). For this reason, SC (in 2014) agreed to use the nominal CPUE with the Harvest Control Rule (HCR) until such time that the CPUE standardization is possible. This was adopted by the Commission in 2015.

Similar issues (i.e., data sparsity) were encountered with the Orange roughy data – which also necessitated the use of an HCR. For all of the reasons outlined above no CPUE standardization was conducted during the 19th SEAFO SC Meeting on the aforementioned fisheries.

8. Report by the Executive Secretary presenting landing tables updated to August 2023.

The Executive Secretary presented data and related information submitted by CPs up to the end of August 2023. Landings data from the Japanese longliner that fished from the 18th of September to the 20th of October 2022, and the Spanish longliner that fished from the 7th of April to the 13th of May 2023 has been validated and added to the landing tables.

All retained and discarded catches were presented in the landings tables ([DOC/SC/03/2023/Rev1 \(10 Nov 2023\)](#)).

A Japanese vessel fished during the period from September to October 2022 and landed around 101.4 tonnes of Patagonian toothfish from Division D0. The ES noted that only one vessel fished in the CA during 2023. By the end of May 2023, the Spanish vessel landed 113.4 tonnes of Patagonian toothfish from Division D1.

9. Review spatial and temporal distribution of fishing activity and biological data.

The spatial distribution maps for all fishing activities recorded from September 2022 to the end of August 2023, as well as the biological data tables, were presented to SC by the Executive Secretary (DOC/SC/04/2023/Rev2 (10 Nov 2023)/Rev1).

The SC reviewed the spatial and temporal maps as provided and noted that fishing activities occurred in the traditional fishing grounds.

The ES reported on the tag releases of Patagonian toothfish which were conducted in 2023 by the Spanish vessel. Two recaptures were recorded in the SEAFO CA of fish that were tagged in the CCAMLR CA. The first fish was tagged in the CCAMLR area during 2013 and recaptured in the SEAFO CA in 2020, while the second fish was tagged in the CCAMLR area in 2017 and recaptured in the SEAFO CA in 2022.

10. Review the spatial distribution of reported catches of benthic organisms (corals, sponges etc.).

The SC reviewed the updated data on incidental catches of VME species from the bottom longline fishery (see Tables 23-38 of [DOC/SC/03/2023/Rev1 \(10 Nov 2023\)](#) for data on VME species. The SC reviewed both the quantities and spatial distribution of catches (DOC/SC/04/2023/Rev2 (10 Nov 2023)/Rev1) and noted that no encounter (according to Article 8 of CM30-15) has been recorded to date.

11. Review Stock Status Reports

11.1 *Patagonian toothfish - (DOC/SC/05/2023)*

The updated Stock Status Report was presented with information up to 31 August 2023. Large catches (per set) and high levels of nominal CPUE were observed in 2022-2023. The stock is considered safe and sustainable if the current TAC (261 tonnes) is extended to 2024 for 3 reasons: (a) recent catches are at historically lower levels, although large catches per set have been observed in 2022-2023, (b) nominal CPUE (2022-2023) has increased sharply by a factor of two compared to the previous period (2009-2021), and (c) the virtual TAC (2024) (274 tonnes) based on the Harvest Control Rule, is 13 tons higher than the current TAC (261 tonnes). SC reviewed and approved all changes made to the Stock Status Report for Patagonian toothfish as highlighted during the 2023 SC meeting.

11.2 *Orange roughy - (DOC/SC/06/2023)*

No fishing for Orange roughy has occurred in the SEAFO CA for since 2005. For this reason, no new data were available to conduct assessments on the state of the stock. The SC only applied minor updates to the Stock Status Report for Orange roughy as highlighted during the 2023 SC meeting.

11.3 Deep-sea red crab - (DOC/SC/07/2023)

The SC reviewed and approved all changes made to the Stock Status Report during the 2023 SC meeting.

11.4 Pelagic armourhead / Southern boarfish - (DOC/SC/08/2023/Rev1 (14 Nov 2023))

The SC reviewed and approved all changes made to the Stock Status Report during the 2023 SC meeting.

11.5 Alfonsino - (DOC/SC/09/2023)

The SC reviewed and approved all changes made to the Stock Status Report during the 2023 SC meeting.

12. Review research activities in the SEAFO CA from October 2022 to date

Two Research surveys were conducted in the SEAFO CA during 2022, both by the EAF Nansen program using the RV Dr Fridtjof Nansen. The ES informed the meeting that the *updated* draft survey reports are available at the following Links:

- Survey1: Leg 3 Bottom habitat mapping survey in the SEAFO Convention Area. The Survey took place from 7 May to 7 June 2022 in the SEAFO Sub-Area A. [DRAFT REPORT.](#)
- Survey 2: Leg 4.1 Fisheries resources in the SEAFO Convention area. The survey took place from 17 June to 12 July 2022. The main goal was to assess the abundance of Orange roughy on the Walvis Ridge (Divisions B1 and C1), and to collect genetic samples for studies on the stock identity. [DRAFT REPORT.](#) Dr. Bjørn Axelsen also gave a presentation to SC highlighting the preliminary results of the survey. He noted that Orange roughy were only recorded at three (out of the seven sampling) sites of the survey. He further noted that Orange roughy catches within the SEAFO CA were much lower than expected – especially when compared to historic catches from commercial fishing and research surveys conducted within the CA. Catches of other important SEAFO species (i.e. Alfonsino, Pelagic armourhead, and Deep-sea red crabs) were also recorded at various sites throughout the survey – but these catches were in relatively low quantities. Dr. Axelsen also noted that they encountered at least two different species of Deep-sea red crab (but mainly *Chaceon erytheiae*, and *Chaceon chuni*) and that these two main crab species were relatively evenly distributed throughout the sampling sites. He also noted that the survey recorded 14 cartilaginous fish species, but that these mainly comprised commercially unimportant groups like chimeras, kitefin sharks, lantern sharks and velvet dogfish (sharks). SC agreed that future surveys by the EAF-Nansen Project in the SEAFO CA will be discussed with the FAO.

13. Examine, where appropriate, assessments and research done by neighbouring States and other organisations

No research done by neighbouring states and other organisations were presented at the 19th SEAFO SC meeting.

14. Data Requests and Research Proposals

No data requests or research proposals were submitted for discussion at the 19th SEAFO SC meeting.

15. Review Total Allowable Catches and related management conditions for Patagonian toothfish, Alfonsino, Armourhead, Orange roughy and Deep-sea red crab.

Due to a decision by the Commission in 2022 that TACs for Patagonian toothfish, Alfonsino, Armourhead, Orange roughy and Deep-sea red crab will be rolled over until 2024 unless the results from the assessment (HCR) at the end of 2023 indicates a major reason to review the TACs. The HCR was applied for Patagonian toothfish to finalize the aforementioned decision taken in 2022 – given that new data were recorded from the fishery in 2022 and 2023.

The SC recommended as follows:

15.1 Orange roughy

Given that no new data were received, **SC recommends a roll-over (status quo) of the 2022-2023 TAC of 4 tonnes bycatch allowance in Division B1, and 50 tonnes in the remainder of the SEAFO CA (subject to exploratory fishing protocols) for 2024.**

15.2 Deep-sea red crab

Given that no new data were received, the SC did not calculate a new TAC for 2024. **SC therefore recommends a roll-over (status quo) of the 2022-2023 TAC of 162 tonnes for Division B1, and 200 tonnes for the remainder of the SEAFO CA for 2024.**

15.3 Patagonian toothfish

New data were received for 2022 and 2023 on which the 2023 assessment was conducted. Applying the HCR based on the average of the CPUE slopes (2018-2022) for catches recorded on Meteor and Discovery Seamounts a TAC estimate of 274 tonnes was calculated.

SC recommends a roll-over (status quo) of the 2022-2023 TAC of 261 tonnes for Sub-Area D, and a zero TAC for the remainder of the SEAFO CA for 2024.

15.4 Alfonsino

Given that no new data were received, the **SC recommends a roll-over (status quo) of the 2022-2023 TAC of 200 tonnes for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1 for 2024.**

15.5 Pelagic armourhead / Southern boarfish

Given that no new data were received, the **SC recommends a roll-over (status quo) of the 2022-2023 TAC of 135 tonnes in the SEAFO CA for 2024.**

16. Any Other matters

16.1. Review of the 2016 Performance Review report relevant to the Scientific Committee

The ES presented a report ([DOC/SC/10/2023](#)) on the issues addressed in the 2016 Performance Review which are of relevance to the SC. SC discussed all issues and drafted responses to relevant issues for consideration to the Commission.

16.2. Conservation Status of Albatrosses and Petrels and ACAP advice on Reducing their Bycatch in SEAFO Fisheries

Dr. Megan Tierney, Vice-convenor of the ACAP Seabird Bycatch Working Group, provided an update on the status and trends of the albatross and petrel species whose distribution overlap with the SEAFO Convention Area ([DOC/SC/11/2023](#)). It was noted that a number of these species are still facing serious population declines, and an update was also provided on ACAPs best practice mitigation advice for reducing seabird bycatch in trawl and longline fishing gear. A summary of other ACAP resources (that could be used to monitor seabird bycatch in fisheries), including guidelines on electronic monitoring and seabird identification were presented.

Considering that there have been only two seabird by-catches by a bottom longliner in the past 12 years (since CM 25/12 came into force), the SC agreed that, while CM 25/12 is consistent with previous ACAP best practice advices, a review of the updated best practices in particular with regard to its safety, practicality and feasibility in the context of SEAFO, will assist in the evaluation of the CM. ACAP has agreed to provide supporting information for the CM evaluation at the next SC meeting, providing this is requested by the Commission.

16.3. Characterisation of the Spanish Patagonian toothfish fishery in the SEAFO CA

Mr. Roberto Sarralde presented the preliminary summary of the 2023 EU-Spain fishing activity in the SEAFO CA targeting Patagonian toothfish, *Dissostichus eleginoides* (DOC/SC/12/2023/Rev1 (November 2023)). Mr. Sarralde presented

results on the catch & effort; distribution of catches as well as the biological data collected during the fishing event that occurred during April & May of 2023.

Mr. Sarralde also summarized the historical data for the EU-Spain Patagonian toothfish (TOP) fishing activities in the SEAFO CA, spanning the period 1997 to 2023. He noted that the gear used was the “Spanish style” bottom longline and that fishing activity has been sporadic throughout the time series. Up to 2020, TOP catches were generally less than 30 tonnes, and distributed in both Sub-Area D and Division D1. However, since 2020 catches have been exclusively in Division D1 and that the largest catch (113t) of the entire time series was recorded in 2023. He noted that prior to 2020 a number of species were retained by the fishery, whereas from 2020 onwards only TOP was retained while macrourids were the most discarded species from this fishery. To date only three individual sharks have been recorded as a bycatch prior to 2010 from this fishery. Length, weight and maturity analysis, for Patagonian toothfish, showed that spawning might occur in the last months (Oct-Dec) of the year. Length by maturity stage was found to be larger for females relative to males.

Mr. Sarralde concluded his presentation to SC in noting that the Patagonian toothfish fishery has never recorded a VME encounter, as defined in the SEAFO VME Encounter Protocols, throughout the entire time series of the fishery.

16.4. Homogenization of the logbooks with other organisations

Mr. Roberto Sarralde proposed changes to the SEAFO data collection forms (mainly Observer Logbooks) to ensure harmonization with data collection forms of other RFMOs such as SIOFA and CCAMLR. One example given was the L4 sheet (daily setting observations) which is separate from the L5 sheet (daily hauling observations) in the SEAFO Observer Logbook. SC agreed that this will require intersessional work (potentially in April 2024) encompassing the alignment of the SEAFO forms to that of CCAMLR forms (and any changes in the forms).

16.5. Update on the Deep-sea Fisheries Project

Dr. Anthony Thompson gave a presentation to SC on the Deep-Sea Fisheries (DSF) Project and highlighted that the DSF Project has a five-year term spanning 2022-2027. He noted that the project covers four components related to deep-sea fishery governance; effective management; cross-sectoral interactions; and knowledge management, communication, monitoring & evaluation. Dr. Thompson indicated that e-learning resources currently exist online for strengthening deep-sea fishery management in areas beyond national jurisdiction (ABNJ). He further noted that the DSF Project Guidelines (adopted in 2008) are currently under review. The results of the review are expected to be published in January 2024. Dr. Thompson also noted that the DSF Project is planning an

Ecosystem Approach to Fisheries Management (ABNJ) Workshop and encouraged all RMFOs to participate in this workshop in 2025.

SC took note of the continuation of this project and strongly supports participation as it will be beneficial for SEAFO, and thus needs it being supported further by the Commission.

17. Advice and recommendations to the Commission on issues emanating from the 2023 meeting.

Agenda point 15.1

Context: 2024 TAC recommendation for Orange Roughy.

Advice: The SC recommends a roll-over (status quo) of the 2022-2023 TAC of 4 tonnes bycatch allowance in Division B1, and 50 tonnes in the remainder of the SEAFO CA (subject to exploratory fishing protocols) for 2024.

Agenda point 15.2

Context: 2024 TAC recommendation for Deep-sea red crab.

Advice: The SC recommends a roll-over (status quo) of the 2022-2023 TAC of 162 tonnes for Division B1, and 200 tonnes for the remainder of the SEAFO CA for 2024.

Agenda point 15.3

Context: 2024 TAC recommendation for Patagonian toothfish.

Advice: The SC recommends a roll-over (status quo) of the 2022-2023 TAC of 261 tonnes for Sub-Area D, and a zero TAC for the remainder of the SEAFO CA for 2024.

Agenda point 15.4

Context: 2024 TAC recommendation for Alfonsino.

Advice: The SC recommends a roll-over (status quo) of the 2022-2023 TAC of 200 tonnes for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1 for 2024.

Agenda point 15.5

Context: 2024 TAC recommendation for Pelagic armourhead / Southern boarfish.

Advice: The SC recommends a roll-over (status quo) of the 2022-2023 TAC of 135 tonnes in the SEAFO CA for 2024.

Agenda point 16.1

Context: Outstanding matters related to the 2016 Performance Review relevant to SC

Advice: SC discussed and formulated responses to the outstanding issues of the 2016 Performance Review (see **APPENDIX III**) as feedback to the Commission request from the 2022 meeting.

Agenda point 16.2

Context: ACAP updated Best Practice Guidelines on the mitigation of seabird bycatches

Advice: SC recommends a review of the updated best practices in particular with regard to its safety, practicality and feasibility in the context of SEAFO. This will assist in the evaluation of SEAFO CM25/12.

Agenda point 16.5

Context: FAO Deep-sea Fisheries Project information update

Advice: SC advises that this project is beneficial to SEAFO and therefore recommends that SEAFO's participation with the project should continue.

18. 2024 Work Program

The SC compiled the work program for 2024 which includes activities pending from previous years. The 2024 SC Work Plan is as follows:

- 18.1 Finalization of Orange roughy genetic analysis and report.
- 18.2 South Africa to continue with the Orange roughy data (catch depths & length frequencies) analysis for catches recorded in the EEZ.
- 18.3 Finalization of standardised SEAFO SC maps – potential virtual meeting on the status of the R script development (tentatively February 2024 – Erich Maletzky).
- 18.4 Continue the investigation on the different approaches for identifying and quantifying VME indicator species abundance from video and image data for drafting guidelines for the SEAFO CA. The ES will liaise with Dr. Thompson regarding this matter and the possibility of financing the training of a prospective university student from SEAFO CPs. The ES will give feedback to SC during the course of 2024.
- 18.5 Obtain more information on the location and timing of spawning aggregations for Orange roughy in the SEAFO CA based on historical data (ES & Mr. Endjambi).

- 18.6 Standardize the CPUE series for key SEAFO commercial fish species for use in stock assessment (Maletzky, Kathena, Sarralde, *et. al.*).
- 18.7 Virtual workshop on the alignment of the Observer logbooks (tentatively April 2024 – Roberto Sarralde).
- 18.8 Task Team to draft a list of prioritized research objectives within the SEAFO CA for consideration at the 2024 SC meeting (tentatively April 2024). Task Team to comprise one representative from each Contracting Party (Dr. Voges, Mr. Louw, Mr. Maletzky, rep. from Japan, Mr. Sarralde, Mr. Antonio, rep. from Rep. of Korea).
- 18.9 SC to start evaluation of CM25/12 – pending approval from Commission.

19. Budget for 2024

No additional budget is requested for the SC.

20. Adoption of the report

The 2023 Scientific Committee Report was adopted by the members.

21. Date and place of the next meeting

The 2024 SC physical meeting shall conduct a full review of the TACs and provide advice for 2025-2026. Five days will be required for this exercise prior to the Commission meeting (preferably 18-22 November 2024).

22. Closure of meeting

On Thursday 23 November 2023 at 13:00, the Chairperson declared the 19th SEAFO Scientific Committee meeting closed. The Chairperson expressed his satisfaction for the work accomplished and thanked all participants and the Secretariat for their valuable contributions. The Contracting Parties also expressed their satisfaction with the way the meeting was organised and conducted and thanked the Secretariat.

SC encourages all Contracting Parties to be committed and participate in future SC meetings as this greatly improves the work of SC and the Commission.

APPENDIX I – List of Documents, Agenda and Annotated Agenda of the 19th Scientific Committee Meeting

DOC/SC/00/2023/Rev2 (15 Nov 2023)



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South East Atlantic Fisheries Organisation (SEAFO)

LIST OF DOCUMENTS FOR THE 19TH SCIENTIFIC COMMITTEE MEETING (SC) – 2023

CHAIRPERSON: Mr. Granville Louw (SA 2022 - 2024)

VENUE: Virtual & Physical Swakopmund

VICE-CHAIR: (ANGOLA)

DATE: 20 - 24 November 2023

Document Ref. Number	Agenda Item	Document Title	Provider	Availability of Document
DOC/SC/00/2023/Rev2 (15 Nov 2023)	All	List of documents	Secretariat	Available before meeting
DOC/SC/01/2023/Rev1 (15 Nov 2023)	All	Provisional agenda of the 19 th Meeting of the Scientific Committee	Secretariat	Available before meeting
DOC/SC/02/2023/Rev2 (15 Nov 2023)	All	Provisional annotated agenda of the 19 th Meeting of the Scientific Committee	Secretariat	Available before meeting
DOC/SC/03/2023/Rev1 (10 Nov 2023)	8/9/10	Landing tables 2023	Secretariat	Available before meeting
DOC/SC/04/2023/Rev2 (10 Nov 2023)	9/10	Report on spatial and temporal distribution of fishing activity	Secretariat	Available before meeting
DOC/SC/05/2023	11	Stock Status Report – Patagonian toothfish	SC Members 2023	Available during meeting
DOC/SC/06/2023	11	Stock Status Report – Orange roughy	SC Members 2023	Available during meeting
DOC/SC/07/2023	11	Stock Status Report – Deep-sea crab	SC Members 2023	Available during meeting
DOC/SC/08/2023/Rev1 (14 Nov 2023)	11	Stock Status Report – Pelagic armourhead/Southern boarfish	SC Members 2023	Available during meeting
DOC/SC/09/2023	11	Stock Status Report – Alfonsino	SC Members 2023	Available during meeting
DOC/SC/10/2023	16	SC Outstanding issues from the 2nd Performance Review	Secretariat	Available before meeting
DOC/SC/11/2023	16	Conservation Status of Albatrosses and Petrels and ACAP Advice on Reducing their Bycatch in SEAFO Fisheries	ACAP	Available before meeting
DOC/SC/12/2023/Rev1 (6 Nov 2023)	16	Characterization of the Spanish toothfish fishery in SEAFO CA.	EU – Sarralde and Barreiro	Available before meeting

DOC/SC/01/2023/Rev1 (15 Nov 2023)



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South East Atlantic Fisheries Organisation (SEAFO)

**PROVISIONAL AGENDA FOR THE 19TH MEETING OF THE SCIENTIFIC
COMMITTEE (SC) - 2023**

CHAIRPERSON: XX (SA 2022 - 2024)**VENUE:** Virtual & Physical Swakopmund**VICE-CHAIR:** XX (ANGOLA)**DATE:** 20-24 November 2023

Item	Agenda Item	Working Document
1	Opening of meeting by Chairperson	
2	Appointment of Rapporteur	
3	Adoption of agenda and meeting arrangements	DOC/SC/01/2023/Rev1 (15 Nov 2023) DOC/SC/02/2023/Rev2 (15 Nov 2023)
4	Introduction & admission of Observers	
5	Introduction of Delegations	
6	Review of submitted SEAFO working documents and any related presentations, allocations to the agenda items	DOC/SC/00/2023/Rev2 (15 Nov 2023)
7	Review of the 2023 work program	
8	Report by the Executive Secretary presenting landing tables updated to the end of August 2023	DOC/SC/03/2023/Rev1 (10 Nov 2023)
9	Review spatial and temporal distribution of fishing activity and biological data	DOC/SC/04/2023/Rev2 (10 Nov 2023)
10	Review the spatial distribution of reported catches of benthic organisms	DOC/SC/04/2023/Rev2 (10 Nov 2023)
11	Review Stock Status Report 11.1 Patagonian toothfish 11.2 Orange roughy 11.3 Deep-sea crab 11.4 Pelagic armourhead / Southern boarfish 11.5 Alfonsino	DOC/SC/05/2023 DOC/SC/06/2023 DOC/SC/07/2023 DOC/SC/08/2023/Rev1 (14 Nov 2023) DOC/SC/09/2023
12	Review research activities in the SEAFO CA since October 2022	
13	Examine, where appropriate, assessments and research done by neighboring States and other organizations	
14	Data Request & Research Proposals	
15	Review Total Allowable Catches and related management conditions for Patagonian toothfish, Alfonsino, Amourhead, Orange roughy and Deep-sea Red Crab	

DOC/SC/01/2023/Rev1 (15 Nov 2023)

16	Any other matters	
	• Review of the 2016 Performance Review report relevant to the Scientific Committee	DOC/SC/10/2023
	• Conservation Status of Albatrosses and Petrels and ACAP Advice on Reducing their Bycatch in SEAFO Fisheries	DOC/SC/11/2023
	• Characterization of the Spanish toothfish fishery in the SEAFO CA	DOC/SC/12/2023/Rev1 (6 Nov 2023)
17	Collate advice and recommendations to the Commission on issues emanating from the 2023 meeting	
18	2024 Work Program	
19	Budget for 2024	
20	Adoption of the report	
21	Date and place of the next meeting	
22	Closure of meeting	

DOC/SC/02/2023/Rev2 (15 Nov 2023)



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South East Atlantic Fisheries Organisation (SEAFO)

PROVISIONAL ANNOTATED AGENDA FOR THE 19TH MEETING OF THE SCIENTIFIC COMMITTEE (SC) - 2023**CHAIRPERSON:** XX(SA 2022 - 2024)**VENUE:** Virtual & Physical Swakopmund**VICE-CHAIR:** XX (ANGOLA 2022 – 2024)**DATE:** 20-24 November 2023

- 1. Opening of meeting by the Chairperson**
The Chairperson will open the meeting and welcome delegates.
- 2. Appointment of Rapporteur**
The Chairperson will ensure the appointment of the rapporteur who will take minutes of the Scientific Committee meeting.
- 3. Adoption of agenda and meeting arrangements**
Members will review and adopt the agenda. Delegates will be informed of any practical arrangements for the meeting by the Executive Secretary ([DOC/SC/01/2023/Rev1 \(15 Nov 2023\)](#) & [DOC/SC/02/2023/Rev2 \(15 Nov 2023\)](#)).
Due to limited time available for virtual sessions, the agenda can be adjusted accordingly before adoption.
- 4. Introduction and admission of Observers**
The Chairperson will announce observers present.
- 5. Introduction of Delegations**
The Chairperson will allow heads of delegations to introduce their delegation.
- 6. Review of submitted SEAFO working documents and any related presentations, allocation to the agenda items**
Members will review research/working documents and presentations submitted ([DOC/SC/00/2023/Rev2 \(15 Nov 2023\)](#)).

DOC/SC/02/2023/Rev2 (15 Nov 2023)

7. Review 2023 work program

SC listed the following tasks for 2023

- 7.1 Finalization of Orange roughy genetic analysis (sending of samples to UP etc.).
- 7.2 South Africa to continue with the Orange roughy data (catch depths & length frequencies) analysis for catches recorded in the EEZ for reporting at the 2023 SC meeting.
- 7.3 Updating of the Observer and Captain's logbook forms to capture tag and recapture information for Patagonian toothfish (ES).
- 7.4 Finalization of standardised SEAFO SC maps and intersessional workshop (Mr Maletzky and ES).
- 7.5 Continue the investigation on the different approaches for quantifying abundance of VMEs from video and image data for drafting guidelines for the SEAFO CA.
- 7.6 Update the relevant SEAFO documents (and database) to incorporate the new FAO/ASFIS codes on four Chaceon species, as well as the scientific name for Pelagic armourhead (by February 2023) (ES).
- 7.7 Obtain more information on the location and timing of spawning aggregations for Orange roughy in the SEAFO CA based on historical data (ES & Mr. Endjambi).
- 7.8 Standardize the CPUE series for key SEAFO commercial fish species for use in stock assessment (Mrs. Maletzky, Kathena, Sarralde, et. al.).

8. Report by the ES presenting landing tables updated with data received until 31 August 2021

The Executive Secretary will present all landings, incidental by-catches and discard tables ([DOC/SC/03/2023/Rev1 \(10 Nov 2023\)](#)).

9. Review spatial and temporal distribution of fishing activity and biological data

Members will review the catches and spatial distribution of non-benthic species as reported by the fishing vessels from 1 September 2022 to 31 August 2023 and make recommendations if necessary ([DOC/SC/04/2023/Rev4 \(10 Nov 2023\)](#)).

10. Review the spatial distribution of reported catches of benthic organisms (corals, sponges, etc.)

Members will review the spatial distribution of benthic organisms as reported by the fishing vessels 1 September 2022 to 31 August 2023 and make recommendations if necessary ([DOC/SC/04/2023/Rev2 \(10 Nov 2023\)](#)).

11. Review the Stock Status Report

Members will review the 2023 compiled Stock Status Reports and update where necessary ([DOC/SC/05/2023](#); [DOC/SC/06/2023](#); [DOC/SC/07/2023](#); [DOC/SC/08/2023/Rev1\(14 Nov 2023\)](#); [DOC/SC/09/2023](#)).

12. Review research activities in the SEAFO CA since October 2022

Members will review research activities conducted between October 2022 and date of SC meeting.

DOC/SC/02/2023/Rev2 (15 Nov 2023)

13. Examine, where appropriate, assessments and research done by neighbouring States and other organisations

Members will examine assessments and research done by neighbouring states and other organisations, if applicable and available.

14. Data Requests and Research Proposals

Members will consider any data requests and research proposals forwarded to the SC.

15. Review Total Allowable Catches and related management conditions for Patagonian Toothfish, Alfonsino, Amourhead, Orange Roughy and Deep-sea Red.

The Commission decided in 2022 that TACs for Patagonian Toothfish, Alfonsino, Amourhead, Orange roughy and Deep-sea Red Crab be rolled over for 2024 **unless** the results from the assessment (HCR) at the end of 2023 indicates a major reason to review the TACs. The SC will conduct a full stock assessment during the 2024 meeting.

During this meeting the HCR will be applied, and the outcome will indicate if the TAC will be rolled over for 2024 or if a major review of the TACs for 2024 is necessary.

16. Any other matters

- 16.1 Review of the 2016 Performance Review report relevant to the Scientific Committee.
The members will consider the recommendations from the 2016 Performance Review relevant to the SC and provide feedback to the Commission. The ES listed the recommendations in [DOC/SC/10/2023](#).
- 16.2 Conservation Status of Albatrosses and Petrels and ACAP Advice on Reducing their Bycatch in SEAFO Fisheries.
Dr Megan Tierney, ACAP Coordinator & South Atlantic Overseas Territories Adviser, will present an update on the subject to the SC for information ([DOC/SC/11/2023](#)).
- 16.3 Characterization of the Spanish toothfish fishery in the SEAFO CA. Paper presented by the EU – Sarraide & Barreiro ([DOC/SC/12/2023/Rev1 \(6 Nov 2023\)](#)).
- 16.4 Homogenization of the logbooks with other organizations to be discussed by the SC on request from the EU.
The rationale behind this is in short:
- To join the "Daily setting observations" with the "Daily Hauling Observations" in a single spreadsheet, and to separate in a different spreadsheet the "Observed catch composition during tally period". Those changes simplify the compilation of the data and makes data recording like that of other organizations.
 - The LL description: To change the format to allow to include the circumstances when the gear that is used is changed within the same trip...it happens to us in SIOFA, and although it has never happened in SEAFO, as far as I know, it could happen in the future.

17. Collate advice and recommendations to the Commission on issues emanating from the 2023 meeting.

SC will collate all the recommendations emanating to the Commission meeting for adoption.

18. 2024 Work Plan

SC to compile a work plan for 2024.

DOC/SC/02/2023/Rev2 (15 Nov 2023)**19. Budget for 2024**

SC will compile a budget for 2024.

There is a provision of N\$ 300,000.00 in the budget which was allocated for genetic analysis. The total cost of the project can be around N\$ 330,000.00 but for in case additional costs are incurred it is recommended to request another N\$ 50,000.00 from SCAF.

20. Adoption of the Report

Members will review the 2023 SC report for adoption.

21. Date and venue of next meeting

Members will agree on a proposed date and place for the 2024 SC meeting to be approved by the Commission.

22. Closure of the meeting

The Chairperson will close and adjourn the meeting.

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APPENDIX III – Review of the 2016 Performance Review – outstanding matters relevant to SC

SCIENCE CONSERVATION AND MANAGEMENT	
Status of living marine resources	
<p>1. For those potential target species where there are no current fisheries this could be based on a risk assessment rather than attempting to move to a full-fledged stock assessment in a situation where no data are available from non-existing fisheries.</p>	
<p>Action: The Commission noted the recommendation and referred the recommendation to the Scientific Committee for consideration and possible implementation.</p>	<p>Responsible entity: Scientific Committee</p>
<p><i>Comment: 2017 SC REPORT - The SC discussed the issue and agreed to explore potential risk assessment approaches applicable to new or re-emerging SEAFO CA fisheries. Members are tasked to explore experiences from SIOFA and IOTC where such approaches are being developed and evaluated. The Commission should be aware, however, of the data limitations in the SEAFO CA; hence the SC may have to resort to providing advice on the basis of precautionary principles without stock or risk assessments.</i></p> <p>2023: Comments to Commission</p> <p>Orange Roughy: A precautionary TAC is set at 50 tonnes in the remainder of the SEAFO CA, subject to exploratory fishing rules.</p> <p>Alfonsino: The TAC is set on ICES data-limited HCR most recent 3 years of data. SC will continue doing that until more catch data becomes available.</p> <p>Pelagic armourhead: The TAC is set on the NAFO HCR. SC will continue doing that until more catch data becomes available.</p> <p>Patagonian toothfish and Deep-sea red crab have now enough data to attempt to conduct standard stock and risk assessments from 2024 onwards and if it is not successful SC will continue to use current HCR.</p>	
Ecosystem approach	
<p>2. The SC should develop Ecosystem status reports regarding the interactions between fisheries and the marine ecosystem within the convention area. This could be one for the convention area or a set of reports for different subsystems within the area. The Ecosystem status report(s) should provide information and scientific advice as required by the Commission to fulfil its role in relation to ensuring that fisheries impact on the marine ecosystem are acceptable. In order to use available resources efficiently on this task a risk-based assessment, as discussed in</p>	

the context of fish species, could be extended to fisheries and also include the wider ecosystem effects of fisheries.	
Action: The Commission noted the recommendation and referred the recommendation to the Scientific Committee for consideration and implementation. The Commission requested that in the future the SC report systematically contains a chapter on Ecosystem status reports.	Responsible entity: Scientific Committee
2023 Comments to Commission: Ecosystem related information are available in Stock Status Reports, specific for each fishery. More information is available from SEAFO Exploratory Fishing Reports and Scientific Surveys. Future collaboration with the Deep-sea Fisheries (DSF) Project with RFMOs regarding roadmap/guidelines for the application of the Ecosystem Approach to Fisheries (EAF) eventually leading into a workshop in 2025.	
3. The Commission should identify criteria for maximum acceptable ecosystem impacts of fisheries in relation to inter alia habitat impacts and incidental bycatch.	
Action: In order to initiate this process, the Commission should request the SC to consider candidates for maximum acceptable impact which are relevant, measurable and can be monitored. The Commission referred the recommendation to the Scientific Committee for advice	Responsible entity: Scientific Committee
2023 Comments for Commission: In 2014 the SEAFO SC agreed to assess bycatch species in terms of TAC-specific fisheries. In 2015 SC confirmed the decision made in 2014 to be applied to the active fisheries of Patagonian toothfish and Deep-sea red crab. SC agreed to only assess bycatch records over 10% of the total catch (across the last three years), and their spatio-temporal distribution. SC agreed that when a bycatch species exceeds the 10% threshold of these two TAC-specific fisheries, SC will recommend a management measure. In the conservation measure [CM-TAC-01-(2021)] for TACs, regulations were set for bycatch of a multi-species trawl fishery targeting Alfonsino and Pelagic armourhead.	

For this reason, a distinction was made between the longline and pot TAC-specific fisheries versus the midwater and bottom trawl (Alfonsino & Pelagic armourhead) TAC-specific fisheries with regards to the bycatch limits.

SC agreed to future collaboration with the Deep-Sea Fisheries (DSF) Project on the roadmap/guidelines for the application of the Ecosystem Approach to Fisheries (EAF) and will consider participation in the planned 2025 DSF workshop.

4. Means to provide better data to indicate potential VME areas should be investigated

Action: The Commission referred the recommendation to the Scientific Committee for advice.

Responsible entity:
Scientific Committee

2023 Comments to Commission:

SC noted that this is partly addressed by VME Indicator Species catch reporting for active and exploratory fishing within the CA (CM30/15). SC further noted that scientific surveys were conducted in 1997, 2008-2010, 2015, 2019, 2020 and 2022 employing multiple approaches (inclusive of underwater video footage and in-situ bathymetry data collection) to identify potential VME areas within the SEAFO CA. SC is currently looking into options for extracting quantifiable data from the 2015, 2020 and 2022 survey video footage result towards identifying potential VMEs within the SEAFO CA. The bathymetry and presence data collected by the Nansen surveys have been shared for VME habitat suitability modeling based on VME occurrence around islands (Ascension, St. Helena & Tristan da Cunha islands), and Valdivia Bank in the SEAFO CA (Bridges *et al.* 2023, DOI: <https://doi.org/10.1016/j.jenvman.2023.118325>).

5. The SC and the Commission to consider ways by which more precise information about potential VMEs can be obtained with a view to focus area closures to protect any potentially vulnerable areas.

Action:The Commission referred the recommendation to the Scientific Committee for advice for future actions.

Responsible entity:
Scientific Committee

2023 Comments to Commission:

SC noted that this has been done by research surveys (e.g. the 2015 Dr. Fridjof Nansen survey resulted in the closure of an area to bottom trawl fishing based on video identification of VMEs).

SC is applying the guidelines for commercial bottom longliners as followed by other RFMOs to quantify VME Indicator Species bycatch for each segment of the longline gear (towards collecting more accurate spatial data on VME occurrences).

SC is currently following closely what other organizations are doing with regards to improving the quantification of VMEs, specifically using survey video imagery.

The Deep-Sea Fisheries Project is conducting a study to document the methodologies for commercial and research vessels to identify potential VMEs in potentially vulnerable areas.