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Southern Indian Ocean Fisheries Agreement
Accord relatif aux Pêches dans le Sud de l'Océan Indien

11th Annual Meeting of the Scientific Committee (SC11)

Fremantle, Australia, 23-31 March 2026

SC-11-36

Convener's Report of the Third Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific Committee (SC) Workshop to progress the SIOFA Precautionary Approach and Management Projects (WS2025-PAM3)

The SIOFA Secretariat on behalf of the Workshop Convener

Document type	Working paper ✔ Information paper ☐
Distribution	Public ✔ Restricted [1] ☐ Closed session document [2] ☐

Abstract

This paper presents the Convener's Report of the Third Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific Committee (SC) Workshop to progress the SIOFA Precautionary Approach and Management Projects (WS2025-PAM3). The recommendations of this paper summarize the recommendations given in the report.

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[2] Documents available only to members invited to closed sessions.

Recommendations

The following is a list of recommendations from the Workshop Report:

- The Workshop noted that continued data collection and collaboration with CCAMLR would be needed. The Workshop recommended that the Scientific Committee continue to use the trend analysis rules for toothfish as these were consistent with the assessment method used by CCAMLR in its research block fisheries.
- The Workshop considered whether to include the common mora (*Mora moro*) and squid in the list of target species for the purpose of Project PAM-2024-02.
    a. The Workshop recommended that common mora should be included, noting that while the level of catch is low, common mora fisheries have large levels of associated bycatch in some areas.
    b. The Workshop recommended that squid should not be included, noting the low level of catch and the lack of information on the specific squid species and their life history parameters. The Workshop also noted that China intends to present further information on squid at SC11.
- The Workshop noted the usefulness of the work presented in the progress report on Project PAM-2024-02 (WS2025-PAM3-02) and recommended that the SC review the draft report at SC11 and discuss the project outcomes further.
- The Workshop recommended that, when considering the outputs of Project PAM-2024-02, the SC review the data availability for low-information stocks and consider allocation of these stocks to the appropriate assessment methods.
- The Workshop recommended the SC consider the Green/Amber/Red categorisation as a system for providing advice to the MoP as to when the performance measures indicated that the stock was performing within the bounds considered by the harvest strategy (green flag), when there were some indications that the stock, while within bounds, may move outside these bounds and additional scientific scrutiny may be required (amber flag), and when exceptional circumstances should be considered (red flag).
- The Workshop noted the usefulness of the work presented in the progress report on Project PAM-2024-03 (WS2025-PAM3-03) and recommended that the SC review the draft report at SC11 and discuss the project outcomes further.

Convener's Report of the Third Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific Committee (SC) Workshop to progress the SIOFA Precautionary Approach and Management Projects (WS2025-PAM3)

Virtual

7 October 2025

Agenda item 1 – Opening 6

a. Welcome from Convenor 6
b. Introduction of meeting participants 6
c. Introduction of the SIOFA-PAM project consultants 6

Agenda item 2 – Administrative arrangements 6

a. Adoption of agenda 6
b. Confirmation of meeting Documents 6
c. Workshop report arrangements 6

Agenda item 3 – Background to the SIOFA-PAM projects 6

Agenda item 4 – SIOFA-PAM project methods and project plans 6

a. PAM2024-02: Determination of Biological Reference Points (BRPs) for key SIOFA fish stocks 7
b. Expert reviewer commentary 8

Agenda item 5 – Discussion of the SIOFA-PAM projects 8

a. Implications and development of PAM-2024-03: Develop harvest strategies for key SIOFA fish stocks 8
b. Recommendations for the proposed PAM2024-03 methods 9

Agenda item 6 – Other business related to the development of the SIOFA precautionary approach and management 10

Agenda item 7 – Development of the Conveners report and summary recommendations 10

Agenda item 8 – Meeting Close 10

Annex A – List of meeting participants 11

List of Annexes

Annex A List of meeting participants

Agenda item 1 – Opening

a. Welcome from Convenor

1. The Workshop was convened by the SC Chairperson, Mr Alistair Dunn.
2. The Convener opened the Workshop and welcomed the participants.

b. Introduction of meeting participants

3. The list of registered participants is included in Annex A.

c. Introduction of the SIOFA-PAM project consultants

4. The Convener welcomed the invited experts and consultants for the Workshop:
    a. Dr Sophie Mormede (soFish Consulting) and Dr Simon Hoyle (Hoyle Consulting), consultants for projects PAM-2024-02 (Determination of Biological Reference Points (BRPS) for key SIOFA fish stocks) and PAM-2024-03 (Development of harvest strategies for key SIOFA fish stocks); and
    b. Dr Anne-Elise Nieblas (COOOL), Dr Sylvain Bonhommeau (IFREMER), and Dr Nathan Walker, consultants for project PAM-2024-04 (Expert review panel for the development of the SIOFA precautionary approach and management projects).

Agenda item 2 – Administrative arrangements

a. Adoption of agenda

5. The agenda was adopted (WS2025-PAM3-ADM-04).

b. Confirmation of meeting Documents

6. The Convener advised the Workshop that the meeting documents are available on the dedicated page on the SIOFA website (https://siofa.org/meetings/WS2025-PAM3)

c. Workshop report arrangements

7. The Convener and the Science Officer, Dr Marco Milardi, introduced the meeting and report arrangements.
8. The Convener noted that the draft convener's report would be circulated to the workshop participants by 17 October 2025 and invited them to provide their comments by 31 October 2025. The report, once adopted, would be submitted to SC11 by the deadline for the submission of documents, on 21 February 2026.
9. Mr Alexander Meyer (Urban Connections, Tokyo) served as rapporteur and supported the Convener in preparing the Convener's report.

Agenda item 3 – Background to the SIOFA-PAM projects

10. The Convener recalled for the Workshop that a summary of all SC projects is available on the SIOFA website https://siofa.org/science/sc-works and that the ToRs and requirements for each of the PAM projects could be accessed there.
11. The Convener provided an overview of the EU-funded SIOFA Precautionary Approach and Management (SIOFA-PAM) Program, which consists of three main projects (PAM-2024-01, PAM-2024-02, and PAM-2024-03) that will be reviewed by a panel of experts (PAM-2024-04). An overview of the precautionary framework, developed under Project PAM-2024-01, was reviewed and discussed at WS2025-PAM2. WS2025-PAM3 will focus on Projects PAM-2024-02 and PAM-2024-03. The outcomes of the SIOFA-PAM Program will be presented at SC11, where the SC will discuss the key conclusions and recommendations and develop advice for the Meeting of the Parties (MoP).

Agenda item 4 – SIOFA-PAM project methods and project plans

a. PAM2024-02: Determination of Biological Reference Points (BRPs) for key SIOFA fish stocks

12. Dr Simon Hoyle, one of the SIOFA-PAM consultants, presented WS2025-PAM3-02, which provided an update on the progress of Project PAM-2024-02. A review of relevant literature, international practices, the classification of SIOFA stocks according to information availability, the types of assessment that can be applied based on information availability, and the current interim BRPs and potential BRPs, has been conducted.
13. The Workshop noted that WS2025-PAM-02 recommended applying a tiered framework based on data availability and assessment type for the diverse species managed by SIOFA, and that generic approaches across all species are not feasible due to varying data quality and stock characteristics across species.
14. Dr Hoyle explained that the potential target reference points (TRPs) and limit (LRPs) in WS2025-PAM-02 are developed based on the best available information and evaluation of reference points using simulations. He noted that control parameters and reference point values will need to vary between stocks, and stock-specific robustness testing is needed for effective BRP implementation. Dr Hoyle also noted that:
    a. As most SIOFA species are information-poor, pragmatic approaches that balance scientific rigor with practical implementation needs will be required.
    b. An adaptive process will allow BRPs to evolve as knowledge increases, providing a foundation for long-term sustainability.
    c. Consistency with the approaches of other organisations, particularly the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) for toothfish, provides benefits through shared knowledge and coordinated management.
15. The Workshop noted that continued data collection and collaboration with CCAMLR would be needed. The Workshop recommended that the Scientific Committee continue to use the trend analysis rules for toothfish as these were consistent with the assessment method used by CCAMLR in its research block fisheries.
16. The Workshop considered whether to include the common mora (*Mora moro)* and squid in the list of target species for the purpose of Project PAM-2024-02.
    a. The Workshop recommended that common mora should be included, noting that while the level of catch is low, common mora fisheries have large levels of associated bycatch in some areas.
    b. The Workshop recommended that squid should not be included, noting the low level of catch and the lack of information on the specific squid species and their life history parameters. The Workshop also noted that China intends to present further information on squid at SC11.
17. The Workshop requested that the consultants include proposed trigger levels for species with low catch that would indicate the need for the SC to consider potential management measures for these species. The Workshop suggested triggers based on a certain percentage change in catch level or, for species with particularly low catch, an absolute amount.
18. The Workshop noted that catch-per-unit-effort would not be a good index of abundance for orange roughy due to concerns about hyperstability.
19. The Workshop noted that the SC is conducting work to develop an aging protocol for alfonsino, which if successful may result in the provision of an alternative and larger set of age data, and that a stock assessment of alfonsino is scheduled for 2026.
20. The Workshop noted that, as next steps, there would be a need to update the calculation of the BRPs as new information becomes available. The Workshop suggested that the consultants provide advice in the final report on the requisite skillsets for conducting this work so as to enable the SC to consider how this work could be conducted and by whom.

21. The Workshop thanked the consultants for their ongoing work under Project PAM-2024-02 and encouraged them to incorporate feedback from this meeting into the final report.
22. The Workshop noted the usefulness of the work presented in the progress report on Project PAM-2024-02 (WS2025-PAM3-02) and recommended that the SC review the draft report at SC11 and discuss the project outcomes further.
23. The Workshop noted that many SIOFA species fall under low-information stocks in the proposed tiered framework. The Workshop noted the value of having a detailed understanding of the data availability for these species, particularly length-frequency data.
24. The Workshop noted that a summary of the available length frequency data for the species considered in the project was given in Table 11 of WS2025-PAM3-02, and that more detailed summaries of available data, including length-frequency data, for SIOFA species can be found in the species-specific fishery summaries and the SIOFA Overview of Fisheries (Sections 10.1 and 10.2).
25. The Workshop requested CCPs to inform the Secretariat if they require any additional information about data availability and requested that the Secretariat support the SC in obtaining any additional information for conducting its review.
26. The Workshop recommended that, when considering the outputs of Project PAM-2024-02, the SC review the data availability for low-information stocks and consider allocation of these stocks to the appropriate assessment methods.

b. Expert reviewer commentary

27. Dr Nieblas, one of the expert reviewers, noted that many of the proposed BRPs have minimum data requirements and suggested that those requirements be defined, that a review be conducted to understand the data availability for individual species relative to those requirements, and that potential ways to improve data collection and long-term data availability be considered. There is also a need to discuss when and how the interim BRPs would be updated, and to ensure clear mapping between biomass-based RPs and fisheries-based ones, which would support clear communication with managers. In addition, it will be important to ensure that the RPs are harmonised internationally, for example with the United Nations Food and Agriculture Organization State of Stocks Index.
28. Dr Walker, one of the expert reviewers, pointed out that the use of CPUE should be treated with caution as management action can also drive fisher behaviour. Dr Walker also endorsed the conclusion drawn by the consultants regarding climate change that there are risks in taking a dynamic B_0 approach and emphasised the need to be certain that any apparent variation in biological parameters is real and not an artifact of data collection methods. In addition, Dr Walker suggested that it may be useful to compare stocks against multiple indicators and see if the indicators support the same conclusions or if they conflict with each other, which may suggest the need for further investigation.

Agenda item 5 – Discussion of the SIOFA-PAM projects

a. Implications and development of PAM-2024-03: Develop harvest strategies for key SIOFA fish stocks

29. Dr Sophie Mormede, one of the SIOFA-PAM consultants, presented WS2025-PAM3-03, which proposed draft methodologies to test harvest control rules as part of the SIOFA project PAM-2024-03. Dr Mormede proposed the testing of the following rules, with a focus on orange roughy and toothfish: threshold rule (hockey stick), ramp-rules (similar to CCAMLR research blocks), constant F rules, F- and ramp-rules (actual CCAMLR research blocks), and constant catch. She sought feedback from the Workshop on any other harvest control rules that should be considered. She also noted that SIOFA currently manages toothfish following the CCAMLR procedures for research blocks and sought feedback on

how likely it is that SIOFA would want to implement a different management framework and how much time and effort should be dedicated to toothfish in the testing of harvest strategies. In addition, she asked which species, other than orange roughy and toothfish, would be of interest, time allowing, and suggested that alfonsino could be a good candidate as it has an approved assessment.

b. Recommendations for the proposed PAM2024-03 methods

30. The Workshop considered the questions from the consultant.
31. The Workshop supported maintaining the current approach of managing toothfish in a manner that is consistent with CCAMLR and considered it unlikely, at this point, that SIOFA would want to implement a different management framework.
32. The Workshop agreed with the consultant's suggestion that alfonsino would be another species of interest.
33. The Workshop noted the usefulness of the proposed three-tier status (Green/Amber/Red Flag) with corresponding actions for fisheries.
34. Dr Nieblas, one of the expert reviewers, supported the use of visual approaches, such as the Green/Amber/Red Flag system, for presenting comparative analyses of stock statuses and encouraged the consultants to explore other methods as well.
35. The Southern Indian Ocean Deepsea Fishers Association (SIODFA) noted that the Green/Amber/Red categorisation ('traffic light' categorization) had a long history in fisheries management but had scarcely been adopted, not least because of the difficulty of handling the amber situation that requires conventional fisheries management.
36. The Workshop recommended the SC consider the Green/Amber/Red categorisation as a system for providing advice to the MoP as to when the performance measures indicated that the stock was performing within the bounds considered by the harvest strategy (green flag), when there were some indications that the stock, while within bounds, may move outside these bounds and additional scientific scrutiny may be required (amber flag), and when exceptional circumstances should be considered (red flag).
37. The Workshop suggested that the consultants consider an additional harvest control rule (HCR) scenario whereby the decay curve on the relative exploitation rate is initially slow, accelerates through the cautious zone, and accelerates again in the critical zone.
38. SIODFA noted its concerns about the reliability of acoustics data for alfonsino.
39. The Workshop discussed the need to consider ecosystem factors, in light of the ecosystem-related management objectives adopted by the MoP. The Workshop noted that the consultants are exploring the incorporation of ecosystem factors as breakout rules. The Workshop further noted that the consultants had explored the feasibility of including climate change considerations in the HCRs, but that they had faced difficulty doing so due to a lack of information and had instead incorporated these considerations in the performance measures and indicators.
40. The Workshop discussed the possibility of assessing the implications of HCRs for bycatch species. The Workshop suggested that the consultants explore whether this would be feasible and, if so, suggest possible approaches in the final report.
41. The Workshop thanked the consultants for their ongoing work under Project PAM-2024-03 and encouraged them to incorporate feedback from this meeting into the final report.
42. The Workshop noted the usefulness of the work presented in the progress report on Project PAM-2024-03 (WS2025-PAM3-03) and recommended that the SC review the draft report at SC11 and discuss the project outcomes further.

Agenda item 6 – Other business related to the development of the SIOFA precautionary approach and management

43. No other business was discussed.

Agenda item 7 – Development of the Conveners report and summary recommendations

44. Paragraphs with recommendations and advice to the SC are highlighted in grey above.

Agenda item 8 – Meeting Close

45. The Convener thanked the consultants and all of the participants for their active contributions.
46. The meeting was closed at 10:45 a.m., UTC, 7 October 2025.

Annex A – List of meeting participants

Delegation	Title	First name	Last name	Position	Organisation
Australia	Mr	Trent	Timmiss	HoD	DAFF
Australia	Mr	Adam	Camilleri	Alternate	DAFF
Australia	Dr	Lyn	Goldsworthy	Advisor	University of Tasmania
Cook Islands	Dr	Stephen	Brouwer	HoD	Ministry of Marine Resources Cook Islands
European Union	Dr	Sebastián	Rodríguez Alfaro	HoD	Marine Sciences/EU
European Union	Mr	Roberto	Sarralde Vizuete	Alternate	IEO
France OT	Dr	Alexis	Martin	SC HoD	MNHN
France OT	Mrs	Adèle	Moisan	MoP HoD	DGAMPA
Japan	Dr	Takehiro	Okuda	Head of Delegation Scientific Committee	Fisheries Resources Institute, Japan Fisheries Research and Education Agency
Japan	Dr	Midori	Hashimoto	SC Alternate	Fisheries Resources Institute, Japan Fisheries Research and Education Agency
Mauritius	Dr	Luvna	Caussy	Scientific Officer	Ministry of Agro-industry, Food-security, Blue Economy & Fisheries
Mauritius	Mr	Kawol	Doorvanand	Senior Technical Officer	Ministry of Agro-industry, Food-security, Blue Economy & Fisheries
Seychelles	Ms	Sabrena	Lawrence	HOD	Seychelles Fisheries Authority
Seychelles	Ms	Dainise	Quatre	Observer	Seychelles Fisheries Authority
Observers - DSCC	Mr	Barry	Weeber	HOD	DSCC
Observers - FAO	Ms	Sarah	Fagnani	Alternate	FAO DSF Project
Observers - SIODFA	Dr	Ross	Shotton	Exec. Sec	SIODFA
Invited Experts	Dr	Anne-Elise	Nieblas	Director	COOOL
Invited Experts	Dr	Sophie	Mormede	Consultant	soFish Consulting
Invited Experts	Dr	Simon	Hoyle	Consultant	Hoyle Consulting
Invited experts	Dr	Sylvain	Bonhommeau	Researcher	IFREMER
Invited experts	Mr	Nathan	Walker	Acting Director, Science and Information	Fisheries New Zealand
SIOFA SC Chair	Mr	Alistair	Dunn	Director	Ocean Environmental
SIOFA SC Vice Chair	Ms	Charlotte	Chazeau	SC Alternate	MNHN
SIOFA SC Vice Chair	Dr	Zhou	Fang	Alternate	Shanghai Ocean

Delegation	Title	First name	Last name	Position	Organisation
					University
Rapporteur	Mr	Alex	Meyer	Rapporteur	Urban Connections
SIOFA Secretariat	Mr	Thierry	Clot	Executive Secretary	SIOFA Secretariat
SIOFA Secretariat	Mr	Pierre	Peries	Data Officer	SIOFA Secretariat
SIOFA Secretariat	Mr	Johnny	Louys	Compliance Officer	SIOFA Secretariat
SIOFA Secretariat	Dr	Marco	Milardi	Science Officer	SIOFA Secretariat