



## Terms of Reference (ToR) for the provision of scientific services to SIOFA Scientific Committee

**Project title: Development of a SIOFA scientific observer data collection manual**

**Project Code: OBS-2025-01**

### INTRODUCTION

The SIOFA Scientific Committee (SC) is tasked to provide fisheries management advice to the SIOFA Meeting of the Parties (MoP). In recent years, SIOFA implemented a series of projects and workshops which contributed to the harmonization of the observer framework. Project SEC2022-OBS1 (2024) constituted the backbone of these efforts, producing observer logbook forms and recommendations which were picked up in workshop WS2024-OBS (2024) and workshop WS2024-OBS2 (2024). These efforts culminated in a dense observer-related agenda item at the 10<sup>th</sup> annual meeting of the SIOFA SC (2025). SC10 identified as a next step in this process the development of detailed biological sampling requirements for primary and secondary species in all SIOFA fisheries. A list of primary, secondary and bycatch species in SIOFA is available in the annually-updated Appendix A of the Overview of SIOFA Fisheries ([https://siofa.org/sites/default/files/files/SIOFA-Fisheries-Overview-2024\\_redacted.pdf](https://siofa.org/sites/default/files/files/SIOFA-Fisheries-Overview-2024_redacted.pdf)).

The content of this manual must cover sampling of “fish” (Chondrichthyes and bony fishes), crustaceans and molluscs, as well as VME indicator taxa. A paragraph explaining the context, why observers are asked to collect this information and how it is used shall be included in every chapter.

In terms of format, this could be made available on a MOODLE or similar platform hosted by the Secretariat, chapters would be written through the use of the tool “book” in which, text, photos and animated images can be inserted. Videos and screencast shall be used to better illustrate the manual. Chapters would be structured to have as little as duplicate text as possible, for example a chapter on how to identify a fish with a key would be followed by the different ID guides clearly labelled by area. Consultant would have an account with a “teacher” status to upload material on the Moodle platform. The content should also be able to be downloaded so that observers can use it offline.

### TERMS OF REFERENCE

#### Project Objectives

Development of an Observer Manual that describes the detailed methods and processes that can be used by all scientific observers in SIOFA fisheries, including the following contents:

- a. Introduction: history of SIOFA, members, species caught (how and where), links with other RFMOs
- b. SIOFA Scientific Observer roles and responsibilities
  - i. Definition of terms
  - ii. SIOFA regulations (CMMs, e.g. CMM 02(2023))

- iii. Overview of roles and responsibilities
- c. Navigation: basic information on calculating distance, what is latitude and longitude, bearing, how distance and degrees of longitude are related, location determination, how to read a map, how speed in KT works, distances in miles etc.
- d. Meteorology and oceanography, current, depression, Coriolis
- e. Biology: basic information (fish, crustaceans, molluscs) on anatomy, biology, reproduction etc.
- f. Data confidentiality (based on CMM 03(2016)), archiving data, backups...
- g. General operational procedures
  - i. Units and formats (length, weight and explaining motion compensated scale, distance, speed in KT, bearing in degrees, time in hours).
  - ii. Standard measurements (LS, LT, LA, LF, mantle length, carapace width and length)
  - iii. Weights.
  - iv. Sexing and maturity stages (identification plates).
  - v. General chapter on different types of sampling: dry, in alcohol, frozen, how to do it and label them properly, including the importance of contamination for genetic sampling.
  - vi. Otolith collection and storage
    - 1. How to remove otoliths.
    - 2. Otolith storage.
  - vii. Tissue sampling (flesh, rays, genetic punches) in alcohol or RNALater solution for genetic studies using sterile sampling techniques.
  - viii. Stomach and stomach content sampling.
  - ix. Tagging and tag recaptures (toothfish and skates, crustaceans): different methods and gear, hygiene, structure of the fish bones and cartilage to explain anchoring of the tags, pictures of the recaptures along with otoliths and a colour template, renaming of the photos through the naming convention presented. See SC-10-70.
  - x. Bird bands: observation and collection (if bird is dead). Some context on the different bird bands methods used and what information are provided in term of population study.
  - xi. Photo-identification (comprehensive chapter provided by France OT).
  - xii. Conversion factor tests (background on studies, library of products with pictures, implementation).
- h. Target catch and bycatch species:
  - i. Primary species definitions and species identification.
  - ii. Secondary species definitions and species identification.
  - iii. Primary and secondary species sampling requirements.

- i. Observations of marine mammals and seabirds, identification guides, method to assess abundance, basic knowledge on their biology and conservation, self-training tool to learn species (same as on CCAMLR website).
- j. Fishing gear (not restricted to gear legally used within SIOFA but an overview of all possible gear, that would include pictures, figures and when available: videos).
- k. Interactions with fishing gear and vessel and mitigation methods associated: birds and vessel, birds and fishing gear (bafflers, tori line, Brickle curtain etc), mammals and fishing gear (exclusion devices...). This would include the use of tori line simulator (SC-10-71).
- l. Depredation: how it works, species involved, evidences of interaction, what are interaction rates and depredation rates, background on species implicated, solutions tried etc.
- m. Vulnerable marine ecosystems (a bit of historical context and link with CCAMLR's work, why some taxa were chosen, some biological basic information on the different phylum), identification guide for VME indicator taxa.
- n. ETP species list
- o. Marine debris. How it works, impact of entanglement, background on beach surveys, educational material and poster.
- p. Vessel requirements
- q. Observer data collection and data submission requirements
- r. Appendices
  - i. Appendix 1 – Identification guides.
  - ii. Appendix 2 – Maps of the SIOFA Areas, Sub-areas, and relevant seamounts/seamount complexes.
  - iii. Appendix 3 – Functions and tasks of Scientific Observers.
  - iv. Appendix 4 – SIOFA Scientific Observer resources.
  - v. Appendix 5 – Recommended lists of Scientific Observer safety gear.
  - vi. Appendix 6 – Recommended lists of Scientific Observer sampling gear and their maintenance.

The order for the different chapters and the structure can be discussed with the consultant.

### **Relevant SIOFA information**

1. SIOFA data (provided by the SIOFA Secretariat upon request)
2. SIOFA spatial data layers. Available on [https://github.com/SIOFASecretariat/SIOFA\\_SC\\_Spatial\\_layers](https://github.com/SIOFASecretariat/SIOFA_SC_Spatial_layers)
3. SIOFA reporting templates. Available on [https://github.com/SIOFASecretariat/SIOFA\\_Reporting\\_templates](https://github.com/SIOFASecretariat/SIOFA_Reporting_templates)
4. SIOFA reports:
  - a. SIOFA SC, SC Working Group, and National Reports. Scientific Committee Meeting | SIOFA (<https://siofa.org/>)
  - b. SIOFA MoP reports. Meeting of the Parties | SIOFA (<https://siofa.org/>)

- c. SIOFA technical and scientific reports (public reports and abstracts of restricted reports are available from <https://siofa.org/>, and full restricted reports will be made available by the SIOFA Secretariat to the project consultant upon request and after the approval of concerned CCPs.

## **Expected progress**

1. Follow the project timeline as detailed in this agreement, including the submission of deliverables.
2. Collect any necessary data as early as possible, e.g. by submitting a data request to the SIOFA Secretariat.
3. Attend a kick-off meeting with the project Advisory Panel (composed by members of the SIOFA Scientific Committee and the SIOFA Secretariat) to discuss the project setup and development. Further engage, as requested, with the Advisory Panel that will assist the consultant access and interpret reports, data, and to provide advice on relevant analyses or data interpretation for the project.
4. Provide regular (i.e. every 2-3 months), proactive updates to the Project Coordinator and the Advisory Panel throughout the project, in particular informing promptly of any unforeseen delay or variation to the project.
5. Submit deliverables on time and appropriately formatted, as required. Each deliverable will be going through a SIOFA review to ensure that it meets the quality targets and the project objectives as set out in the Terms of Reference.
6. Appropriately acknowledge the project funding source (e.g. EU or SIOFA), with appropriate corresponding logos in prominent positions, within each deliverable.
7. Take into reasonable account the outcomes of the SIOFA review or any comments made by meeting attendees, when revising the deliverables.

## **Expected deliverables**

1. A (virtual) presentation of preliminary methods and results to the next SIOFA SC annual meeting (end-March 2026), to be confirmed depending on contract duration.
2. A Draft Report that addresses the project objectives and tasks as laid out in this contract, which will be reviewed by SIOFA. The report should follow the guidelines and format available at [https://github.com/SIOFASecretariat/SIOFA\\_Reporting\\_templates](https://github.com/SIOFASecretariat/SIOFA_Reporting_templates) . In particular, the report should include a concise (max 300 words) summary, and should detail the methods, the outcomes, conclusions, and concise recommendations.
3. A Final Report revised by considering any comments and advice from the SIOFA review or comments received during meetings, to be further reviewed by SIOFA. The Consultant is to submit this Final Report to the SIOFA Secretariat following the guidelines and format available at [https://github.com/SIOFASecretariat/SIOFA\\_Reporting\\_templates](https://github.com/SIOFASecretariat/SIOFA_Reporting_templates).
4. Provide all the information collected to the SIOFA Secretariat (including that sourced from the Secretariat) before the final payment of the contract. Such information includes electronic data files, analysis codes, biological samples, and other relevant data if applicable.

Presentations of reports to the Scientific Committee may be given virtually and travel to the meetings is not obligatory.

## **Acceptance of Draft and Final Reports**

1. Draft and Final Reports must be submitted to the SIOFA Secretariat (Project Coordinator).
2. Draft and Final Reports will be reviewed by SIOFA using the procedures outlined in paper MOP-09-12 (Annex B), see also [https://github.com/SIOFASecretariat/SIOFA\\_Reporting\\_templates/tree/main/SC%20reports/Review%20template%20for%20consultant%20reports](https://github.com/SIOFASecretariat/SIOFA_Reporting_templates/tree/main/SC%20reports/Review%20template%20for%20consultant%20reports).
3. Payment of contracts milestones will be subject to acceptance of the submitted reports by SIOFA.

## Intellectual Property clause and confidentiality

The Consultant shall submit all the information collected to the SIOFA Secretariat (including that sourced from the Secretariat) before the final payment of the contract is made to the consultant. Such information includes electronic data files, analysis codes, biological samples, and other relevant data if applicable. Any arrangements for ownership, storage, or disposal of physical samples shall be agreed by SIOFA as a part of the contract. All Intellectual Property generated as a part of this contract shall become the property of SIOFA unless otherwise excluded in the proposal and agreed by SIOFA in the contract. The Consultant shall not release confidential data provided for conducting this study to any persons nor any organizations, other than SIOFA Secretariat. The Consultant shall delete all the confidential data upon the completion of the contract.

## WORK TIMELINE AND PAYMENT SCHEDULE

The funds for this project allow for a maximum total budget of 15 000 Euros (including all costs and any travel related expenses).

The consultant shall follow the timeline described in Table 1 below.

**Table 1: Timeline for payments, milestones, and report submission**

Milestone	Date	Activities
Initiation of contract	30 September 2025	First instalment payment (30% of the total contract sum)
Presentation of preliminary results	23 March -1 April 2026	Presentation of preliminary methods and results to the SC11 meeting (virtual)
Delivery of draft report	15 April 2026	Second instalment payment (30% of the total contract sum) upon satisfactorily submission of draft report, in a format suitable for submission to SC, to the project coordinator.
Delivery of final report	1 June 2026	Submission of final report in a format suitable for submission to SC and submission of project information to the project coordinator.  Final instalment payment (40% of the total contract sum) on acceptance of the final report by the advisory panel and the final submission of project information

## SUBMISSION OF APPLICATIONS

1. A current CV that summarises the applicant(s) relevant educational background and professional experience.
2. A brief proposal (indicatively 1-3 pages) outlining the proposed methods and analyses, including a description of how the objectives of the ToR will be achieved.
3. Any proposed exclusions to the intellectual property clause or variations to the work timeline and payment schedule.
4. The proposed consultancy price (including all consultant expenses and project related costs), noting that the available budget for this work indicated in Section 3.
5. Identification of any project risks and associated mitigation and management required to successfully complete the project.
6. A statement that identifies any perceived, potential, or actual conflicts of interest of the applicant(s), including those described in paragraph 4 of the SIOFA recruitment procedure (see Section 6), and
7. Any additional relevant information the applicant(s) wish to submit.

The applicants must have appropriate experience and knowledge of fish population dynamics, particularly of deepwater species, and knowledge of climate change models and the effects of climate change on marine fish abundance and distribution.

Applications must be submitted to the SIOFA Science Officer (Marco Milardi, [marco.milardi@siofa.org](mailto:marco.milardi@siofa.org), CC [secretariat@siofa.org](mailto:secretariat@siofa.org)). Only those applications received **before 12:00 PM (9:00 AM UTC) on the 15<sup>th</sup> of September 2025**, Reunion Island time, will be considered.

## EVALUATION CRITERIA FOR THE SELECTION OF CANDIDATES

An evaluation panel, the SIOFA Secretariat, and the Chair and Vice-Chairs of the SIOFA Scientific Committee will select one successful applicant for this contract. The selection criteria will include the following:

1. Adequate submission of information to allow the panel to evaluate the candidate
2. Evaluation of the proposal from the candidate, including the proposed contract price
3. Ability to undertake and complete the analyses or work required in this ToR
4. The candidate's agreement with confidentiality provisions required for the project
5. Acceptable conflict of interest statement
6. Agreement with the data submission and intellectual property terms required in this ToR, and
7. Financial and resourcing considerations.

## CONFLICTS OF INTEREST. PARAGRAPH 4 OF SIOFA'S RECRUITMENT PROCEDURE

*To ensure that situations relating to potential and actual conflict of interests are avoided, persons falling into the following categories may not normally be considered for SIOFA consultancy: (i). any person designated as a designated representative or alternate representative of a CCP to the Meeting of Parties (MOP) as per Rule 3.1 of the Rules of Procedure, and to the SC and any other subsidiary bodies of the MOP, as per Rule 21.3 of the Rules of Procedure; (ii). Any person fulfilling the function of Chair or Vice-Chair of the MOP or Chair or Vice-Chair of a SIOFA subsidiary body or working group; (iii). Any person acting as a member of a delegation involved in the SIOFA decision-making process resulting in recommendations and/or approval for the SIOFA work requiring the engagement of a consultant; and (iv). Individuals who were SIOFA Secretariat staff members at the time when the recommendations and/or approval for the SIOFA works were adopted or who are members of immediate family (e.g., spouse or partner, father, mother, son, daughter, brother, or sister) of any Secretariat staff member or of*

*the persons identified in 4 (i), (ii), and (iii).*

## **CONTACTS**

Project Coordinator – SIOFA Science Officer (Marco Milardi, [marco.milardi@siofa.org](mailto:marco.milardi@siofa.org))

Administrator – SIOFA Executive Secretary (Thierry Clot, [thierry.clot@siofa.org](mailto:thierry.clot@siofa.org))

## **REFERENCES**

SEC2022-OBS1 Establish a framework for scientific observation of SIOFA fisheries (2024)

<https://siofa.org/science/sc-works/SEC2022-OBS1>

WS2024-OBS Scientific Committee Workshop on the Harmonisation of Scientific Observers (2024)

<https://siofa.org/meetings/WS2024-OBS>

WS2024-OBS2 Scientific Committee Workshop on Scientific Observer Forms (2024)

<https://siofa.org/meetings/WS2024-OBS2>

SIOFA Scientific Committee (2025) Report of the 10<sup>th</sup> annual meeting of the SIOFA SC

<https://siofa.org/sites/default/files/2025-04/SIOFA-SC10-Report.pdf>