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MoP-11-INFO-17

FAO Deep Sea Fisheries (DSF) Project

Update of activities 2023-2025

The Food and Agriculture Organization of the United Nations (FAO)

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Document type	working paper <input type="checkbox"/> information paper <input checked="" type="checkbox"/>
Distribution	Public <input checked="" type="checkbox"/> Restricted ¹ <input type="checkbox"/> Closed session document ² <input type="checkbox"/>
Abstract	<p>The FAO implemented, Common Oceans Deep-sea Fisheries (DSF) Project (2022-2027) aims to ensure that DSF in the ABNJ are managed under an ecosystem approach that maintains demersal fish stocks at levels capable of maximizing their sustainable yields and minimizing impacts on biodiversity, with a focus on data-limited stocks, deepwater sharks and vulnerable marine ecosystems. The DSF Project is delivered in collaboration with co-financing partners, which include the seven RFMOs responsible for the management of deep-sea fisheries stocks in areas beyond national jurisdiction (ABNJ), among them SIOFA.</p> <p>The purpose of this paper is to provide an overview of DSF Project activities from 2023-2024, and highlight upcoming activities for 2024-2025, relevant to SIOFA.</p> <p>Importantly, the DSF Project wishes to seek feedback from SIOFA CCPs regarding:</p> <ul style="list-style-type: none">• Their interest in a proposed observer training, to take place in November or December 2024, and targeting primarily GEF eligible CCPs, including Mauritius, Seychelles and Thailand, but also welcoming the participation of all SIOFA CCPs; and• Their interest in participating in a Symposium on the Ecosystem Approach to Fisheries Management, to take place from 11-13 March 2025 at FAO Headquarters in Rome, Italy.

¹ Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).

² Documents available only to members invited to closed sessions.

Background

The ‘Deep-sea Fisheries under the Ecosystem Approach’ (DSF) Project is one of five child projects of the Global Environmental Facility funded Common Oceans Program Phase II (2022-2027). The DSF project is implemented by FAO and executed by the General Fisheries Commission for the Mediterranean (GFCM), in collaboration with co-financing partners, which include the seven regional fisheries management organizations (RFMOs) responsible for the management of deep-sea fisheries stocks in areas beyond national jurisdiction (ABNJ)³, as well as other international and national organizations⁴. The objective of the project is to ensure that DSF in the ABNJ are managed under an ecosystem approach that maintains demersal fish stocks at levels capable of maximizing their sustainable yields and minimizing impacts on biodiversity, with a focus on data-limited stocks, deepwater sharks and vulnerable marine ecosystems. SIOFA is one of the seven partner RFMOs of the project.

The DSF Project was presented in detail at the SIOFA MoP10. Further background information on the project can be found in the information document [MoP-10-INFO-13](#).

The purpose of this paper is to provide an update of DSF Project activities carried out during the period July 2023 to June 2024, as well as highlight key upcoming activities, relevant to SIOFA.

2023-2024 project activities relevant to SIOFA

Review of the implementation of the DSF Guidelines

The DSF Project, in collaboration with a panel of experts, has reviewed the implementation of the *International Guidelines for the Management of Deep-sea Fisheries in the High Seas* (DSF Guidelines) 15 years after its adoption. The review found that the DSF Guidelines has been primarily directed towards the protection of VMEs, resulting in a complete change in the way bottom fisheries are managed. RFMOs have adopted closures to protect areas known or likely to have VMEs, designated bottom fishing areas where bottom fishing has occurred and can continue to take place, required strict protocols to be followed if bottom fishing is planned outside of this area, and introduced “encounter protocols” to protect any newly identified VMEs. Less progress has been made on the sustainable management of many DSF stocks, however, with a generally low uptake of the recommended actions of the DSF Guidelines to adopt measures necessary to ensure their sustainability. In particular, the adoption of fishery-specific, long-term management plans have generally not been implemented.

The document can be downloaded at:

<https://openknowledge.fao.org/handle/20.500.14283/cd0243en>

³ General Fisheries Commission for the Mediterranean (GFCM), North East Atlantic Fisheries Commission (NEAFC), Northwest Atlantic Fisheries Organization (NAFO), North Pacific Fisheries Commission (NPFC), South East Atlantic Fisheries Organization (SEAFO), Southern Indian Ocean Fisheries Agreement (SIOFA) and South Pacific Regional Fisheries Management Organization (SPRFMO)

⁴ International Council for the Exploration of the Sea (ICES), Southern Indian Ocean Deepsea Fishers Association (SIODFA), International Coalition of Fisheries Association (ICFA), and the National Oceanic and Atmospheric Administration (NOAA) of the United States of America

E-learning Course “Strengthening deep-sea fisheries management in areas beyond national jurisdiction”

The DSF Project has produced an introductory e-learning course on the management of DSF in the ABNJ to provide a free, easily accessible tool to support learning on this topic.

The e-learning course encompasses five comprehensive modules, including:

- An introduction to deep sea fisheries, their biological characteristics, current status of stocks, and challenges in their management in the ABNJ.
- An overview of the international policy and legal framework for the management of DSF.
- The role of RFMOs in the management of DSF, explaining the process of their creation, structure, functions, and mandates in the management of DSF in the ABNJ.
- National-level policy and legal considerations, describing key measures included in national policy and legal framework for the sustainable management of DSF and enumerating the steps necessary to establish effective policy and legal framework at a national level.
- The role of monitoring, control and surveillance (MCS) and enforcement mechanisms to achieve conservation and sustainable use of deep-sea fisheries.

The course takes approximately 2.5 hours to complete, and upon the subsequent completion of a short, knowledge-based exam, participants receive a certificate of competency.

The free, online course can be accessed at: <https://elearning.fao.org/course/view.php?id=1117>

Industry Workshop

The DSF Project held a workshop with DSF industry operators from across the globe to explore proactive contributions from industry to sustainable DSF. The report of this workshop has been submitted as a separate information paper (MoP-11-INFO-16).

Development of a “smart” Deepwater Shark Guide

With financial support from the DSF Project, experts from the Virginia Institute of Marine Science and FAO are developing a streamlined, intuitive digital smart guide to improve the identification of deepwater chondrichthyans by non-taxonomists in the Indian Ocean. The proposed key will present multiple character choices simultaneously, and selecting characters will alter the remaining choices. All character choices will be illustrated with photographs when possible. The key will be developed alongside observers and factory workers in the field with “fish in hand” to determine which characters are most useful to non-taxonomists when discerning species.

This project also leverages SIOFA project DWS-2023-02 Identification and trends in Deepwater Sharks (<https://siofa.org/science/sc-works/DWS-2023-02>), showing a good synergy between the DSF project and SIOFA objectives.

Deep-sea Fisheries Technical Forum

The Deep-Sea Fisheries Technical Forum, managed by the Deep-Sea Fisheries Project, is a participatory and public platform that brings together fisheries specialists and stakeholders to discuss challenges and innovative solutions for the sustainable management of deep-sea fisheries.

Currently, the forum is facilitating a global discussion aimed at identifying and trialling new technologies to enhance onboard data collection. These discussions are structured monthly, with a new question posed at the beginning of each month. Over the last three months, we have discussed about key challenges in accurate data collection, with solutions proposed including the use of electronic monitoring and cameras to assist observers; as well as about limitations with current data recording procedures and tools, highlighting the potential of electronic monitoring, smart keys for fish identification, and advanced technologies like machine learning for improving data collection. By the end of the 4-month discussion, the DSF Project aims to identify technologies worthy of trialling based on the discussions held.

Join the DSF Technical Forum at: https://dgroups.org/fao/common_oceans_program/dsf-technical-forum

Proposed activities for SIOFA 2024-2025

Observer training

In 2023, the SIOFA MoP10 adopted an implementation plan to address the recommendations from the SIOFA 1st Performance Review (MoP10 report, Annex G). Representatives of the FAO DSF Project noted at the meeting that there was good alignment between the activities listed in MoP 10 Annex G and the activities of the DSF Project, and expressed their readiness to collaborate with and support SIOFA in areas such as capacity building, stock assessment, and observer training (MoP10 report, para 25).

The DSF project was pleased to hold informal discussions with many CCPs at MoP10 on potential approaches to progress such collaboration, in particular regarding the endorsement by MoP of the benefits of capacity building, particularly data capture, data quality, and data reporting, for developing States (MoP 10 report, Annex G. 6.)

Subsequently, at the SC9 in 2024, the DSF project outlined a proposal to provide funding to support eligible CCPs in relation to both training observers and to preparing and improving documentation to support observer programmes. This proposal was welcomed by the Scientific Committee (SC9 report, para 364).

In the context of SC9 para 364 'eligible CCPs' is assumed to refer to those CCPs that are on the list of GEF eligible countries (<https://www.thegef.org/projects-operations/recipient-countries>). Four SIOFA CCPs fall into this category: Cook Islands, Mauritius, Seychelles and Thailand. Three of these CCPs - Mauritius, Seychelles and Thailand - are engaged in fisheries in SIOFA Sub Area 8, on the Saya de Malha Bank.

The geographic overlap in fishing activities of CCPs in Subarea 8 provides a focus for the DSF Project to provide capacity building for scientific observer training in SIOFA. It is proposed that this training would take the form of a 3-4 day workshop that would be arranged to support observer programmes by addressing structural, operational and supporting technologies themes as follows:

Observer Programme Structure

Training to address structural implementation of a national observer programme that is consistent with the objectives and requirements of SIOFA.

Initially the training will focus on the implementation of an Information Security Management System (ISMS), that includes confidentiality and security of data collected by observers, and the provision of appropriate safety and scientific equipment to the Observer.

Observer Programme Operations: Training of observers

Training to address operational implementation of a national observer programme that is consistent with the objectives and requirements of SIOFA.

Initially the training will focus on ensuring that Observers can:

- (i) identify all target, primary and secondary fish species caught in SIOFA fisheries and all marine mammal and seabird species likely to interact with SIOFA fisheries, and
- (ii) record the parameters required to describe fishing operations and implement the sampling and measurement methods required to collect the fishery-specific biological data.

Supporting technologies

Training to address the use of new and innovative technologies for improved collection of data as part of a national observer programme that is consistent with the objectives and requirements of SIOFA.

Initially the training will focus on identifying specific data collection priorities that could benefit from enabling technologies, including, inter alia:

- (i) interactive tools for observer training,
- (ii) electronic data collection forms and identification guides to assist observers for scientific and compliance monitoring, and
- (iii) image recognition to assist observers in on-board catch, bycatch and discard recording.

Importantly:

- While this training would be targeting the three GEF eligible CCPs Mauritius, Seychelles and Thailand, it would nevertheless be open to the participation of all CCPs, consistent with the harmonised approach to scientific observation in SIOFA;
- In terms of timing, the training is proposed to take place in November or December 2024.

The DSF Project is seeking feedback from SIOFA CCPs regarding their interest in this proposed observer training course.

EAFM Symposium

The DSF Project, in collaboration with the Northwest Atlantic Fisheries Organization (NAFO) and the International Council for the Exploration of the Sea (ICES), will be organizing an Ecosystem Approach to Fisheries Management (EAFM) Symposium, to be held from 11 - 13 March 2025 at FAO headquarters in Rome, Italy.

The symposium will focus on the implementation of the ecological components of EAFM, including retained species, non-retained species, and ecosystem considerations.

The three-day symposium will focus on:

- Day 1: Scientific aspects of EAFM
- Day 2: Management aspects of EAFM
- Day 3: Developing guidance for implementation of EAFM by dsRFMOs

This will be mainly an in-person meeting with preference given to those people who work with RFMOs as managers or scientists.

The Symposium will be broadcast but there will be no on-line participation. There will be no charge for attending and the broadcast will be open for all. Proceedings will be published in the online open-access *Journal of the Northwest Atlantic Fishery Science*.

The Symposium will strive for gender balance.

Keynote speakers, panel session chairs, and speakers will be by invitation. An announcement will be available on the Symposium website and also circulated to the deep-sea RFMOs and CCAMLR.

Representative from tuna-RFMOs will also be invited to share their experiences.

There will be limited financial support available through the Deep-sea Fisheries project (FAO), NAFO and ICES, to attend the Symposium.

The DSF Project is seeking feedback from SIOFA CCPs regarding their interest in participating in the EAF Symposium.

Nansen Cruise

The DSF Project, in collaboration with FAO's Nansen Programme, is proposing a research cruise using the *R/V Dr Fridtjof Nansen*, to take place from 12–30 June 2025 around the Walter's Shoal or the SW Indian Ridge.

The purpose of the cruise would be to:

- Improve acoustic biomass estimates for alfonsino and/or orange roughy.
- Undertake benthic surveys to study the distribution of vulnerable marine ecosystems and improve the species distribution modelling.
- Extend work on deepwater shark identification and further trial the smart identification key
- Provide opportunities for the training of up to 19 scientists and observers from SIOFA CCP members.

All information available on this research cruise is outlined in a separate working paper, MOP-11-27 (note that this paper will be revised before the start of the meeting to include additional information).