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# FAO Deep-Sea Fisheries (DSF) Project Overview of activities 2024-2025

The Common Oceans Deep-sea Fisheries Project, FAO

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<b>Abstract</b>	
The FAO Deep-Sea Fisheries (DSF) Project (2022-2027), entitled “Deep-sea Fisheries Under the Ecosystem Approach”, follows on from the ABNJ Deep-Sea Project (2014-2019). Information papers on this project have been submitted to several past SIOFA meetings.	

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# FAO Deep-Sea Fisheries (DSF) Project Overview of activities 2024-2025

## Introduction

The FAO Deep-Sea Fisheries (DSF) Project (2022-2027), entitled “Deep-sea Fisheries Under the Ecosystem Approach”, follows on from the ABNJ Deep-Sea Project (2014-2019). Information papers on this project have been submitted to several past SIOFA meetings, including to SC last year (FAO, 2025a, b, c).

## FAO Common Oceans programme and DSF Project

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)<sup>3</sup>, as well as other international and national organizations<sup>4</sup>. 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.

The technical work of the DSF project is organized around three main components representing three broad areas of work:

- Component 1 concerns the uptake of international instruments
- Component 2 concerns the scientific aspects of DSF management
- Component 3 concerns cross-sectoral interactions with DSF

The DSF Project will end on 31 May 2027, which is in a little over a year’s time. This means that new activities will not be started and that the time is spent finishing off the current activities. Also, more time will be spent on communications to ensure that the work of the project reaches its intended audiences.

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<sup>3</sup> 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)

<sup>4</sup> 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

## Key Achievements and upcoming activities 2025-2026

### Ecosystem approach to fisheries management/climate change/precautionary approach

The project has been involved in supporting RFMOs with the:

- Ecosystem approach to fisheries management
- Climate change, and the
- Precautionary approach

There has been work on all these three aspects particularly in the scientific committees, but that there exists a gap or barrier to further uptake because of:

- Uncertain science and an appreciation that, though many areas of this work are progressing scientifically, major break throughs in our technical understanding are unlikely to occur in the next 5-10 years, and
- The various committees, and particularly the science and management committees, need to work closer together to improve a mutual understanding of the ways forward. An increase in joint management-science meetings would help with this.

The project is holding a workshop with managers on 15-16 June 2026 to discuss process and frameworks related to work on Ecosystem approach to fisheries management, climate change, and the precautionary approach. These three topics will be discussed together because the process to further their implementation are similar.

The project is also developing a guidance document on the implementation of the precautionary approach by RFMOs to be published in one of FAO's technical series. This will serve to support FAO's precautionary approach guidelines developed in 1995 (FAO, 1996).

### Data limited stocks

The project has been working with ICES and the RFMOs to develop a forum for discussion and development of data-limited stock assessment methods. ICES is coordinating the work under a letter of agreement with FAO and the DSF Project. The overall design was developed at the ICES WKLIFE meeting in August 2025 (ICES, 2025). Assessment experts from the DSF project's partners gave presentations. The main stock foci are: alfoncino, armourhead, sablefish, toothfish, and deep sea red crab.

A workshop will be held in Tokyo, Japan on 20-24 April with these RFMO experts and members of WKLIFE to discuss assessment and develop methods. This will be followed by a further workshop at FAO, Rome on 31 August to 4 September 2026. The final review will be at ICES WKLIFE XV in September 2026.

### Deepwater shark work

The project's deepwater shark work had been previously reported to SIOFA SC (FAO, 2025c). This has included work on species identification using traditional taxonomy supplemented with DNA and eDNA analyses. This work is in progress and will be reported to SC separately by Paul Clerkin.

Also, is the development of a digital deepwater shark identification key with Edoardo Mustarda and Paul Clerkin that underwent trials and improvements during and after the R/V *Dr. Fridtjof Nansen* cruise in December 2025. This will soon be published and available for use. The DSF Project can provide support for the use of the key, including training.

As well as work on identification materials for use by onboard observers here is also project work on developing guidance to RFMOs on the most appropriate ASFIS codes to use for vessel reported catches of all cartilaginous fish. The aim of this work is to improve the information content of catch reporting, by, for example not using very highly aggregated ASFIS codes such as SKX which is “Sharks, rays, skates, etc. NEI”.

The use of the SKX ASFIS code clearly does not reflect an inability to identify catch as it is simple to distinguish between the very different morphologies involved, however, when it used the catch could include some species of deepwater sharks, but it is not possible to determine whether this really is the case. This follows on from work undertaken last year (FAO, 2025a).

### Cross-sectoral meeting

Ocean governance has changed dramatically over the past 50 years and especially over the past 10 years. As well as fisheries, there are other stakeholders that includes mining (International Seabed Authority), shipping (International Maritime Organisation) and, from this year, sustainable use and biodiversity conservation (Biodiversity Beyond National Jurisdiction). There are also global targets with the sustainable development goals (United Nations) and the Kunming-Montreal Global Biodiversity Framework (Convention on Biological Diversity).

The DSF Project held a workshop on “Cross-sectoral interactions with deep-sea fisheries in areas beyond national jurisdiction (ABNJ)” on 24-26 September 2025 at FAO HQ, Rome. The workshop was well attended and discussion included how different sectors interact with fisheries (Johnson et al, 2025), international organisations can formally and informally interact and how the BBNJ agreement with interact with the work of fisheries. A general view was that interaction among international organisation is challenging, especially when the agreements are signed by States and not the organisation themselves. There is rarely a forum whereby the organisations can hold discussions together, because of their structure and make-up for contracting party members. Informally, collaboration occurs and is welcomed. The BBNJ agreement, now in force, is most likely to interact with fisheries through environmental impact assessments and the establishment of area-based management tools including marine protected areas. However, the BBNJ needs to establish its committees and rules of procedure prior to understanding how it will interact more fully with fisheries. FAO has produced a publication to explain fisheries and the BBNJ agreement (FAO, 2026).

The DSF Project plans a follow up meeting entitled “A plan for strengthening the strategic vision for fisheries communications, engagement and actions in relation to biodiversity conservation” on 17-19 June 2026, mainly focusing on manager participation.

### *R/V Dr. Fridtjof Nansen cruise*

The DSF Project coordinated, with SIOFA and the FAO EAF Nansen program, a cruise in the southwestern Indian Ocean. The idea was first muted on 28 June 2019 in an email from Tony Thompson to Merete Tandstad of the EAF Nansen program. After a lot of work and support for partners, the cruise started out of Maputo, Mozambique on 20 December 2025 and finished at Cape Town, South Africa on 11 December 2025. The principal objectives of the cruise were to:

- acoustic surveys of alfonosino to determine the most appropriate methods
- deploying demersal (benthic) and pelagic trawls.
- CTD casts
- deepwater sharks - taxonomic and “smart” identification key.
- To collect selected teleost species
- BRUV (baited remote underwater video) for sharks and benthos (VMEs)

- To collect eDNA samples
- To take benthic samples using a grab
- bottom bathymetry
- seabird and marine mammal survey

The results will be reported in a separate document.

### [Toothfish fisheries workshop proposal](#)

[The DSF Project is seeking input from the SIOFA SC on the value of a workshop on data and knowledge sharing in toothfish longline fisheries, potentially involving SIOFA, SPRFMO, SEAFO and CCAMLR \(Annex 1\). The aim of the workshop would be to provide a forum for data and knowledge sharing for the toothfish longline fisheries to promote a shared understanding of assessment approaches being taken in different management bodies. It will also provide an opportunity to identify how data gathered in each of the toothfish fisheries can be brought together to alleviate data-limitations in individual fisheries.](#)

### Miscellaneous – Photographic guide

The FAO Nansen program has recently produced a photographic guide on the “Marine biodiversity of the Saya de Malha Bank shallows: A photographic catalogue” (Bhagooli et al., 2024). This informative publication showcases the unique features of this area.

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[Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks\(WKLIFEXIII\) - International Council for the Exploration of the Sea - Figshare](#)

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## Annex 1

### Food and Agriculture Organization (FAO) Common Oceans Program, Deep-Sea Fisheries Project

#### Concept Note: Proposal for DSF Project workshop on data and knowledge sharing in toothfish longline fisheries

Demersal longline fisheries for Patagonian toothfish (*Dissostichus eleginoides*) are currently conducted in areas managed by SPRFMO, SIOFA and SEAFO and in areas adjacent to these RFMOs by CCAMLR<sup>1</sup>.

Some fisheries are managed using integrated assessments in the Atlantic and Indian Ocean sectors under the auspices of CCAMLR, although there are also data-limited (exploratory) fisheries for toothfish in areas of CCAMLR bordering the three RFMOs. Despite differences in terminology and the time over which fisheries have been undertaken, each management body has recognised the data limitations associated with their respective fisheries management approaches.

Fish tagging and recapture is a central element of CCAMLR's approach to management for toothfish and this has been adopted as part of the requirements for toothfish fisheries in SPRFMO, SIOFA and SEAFO. These RFMOs all require the use of CCAMLR supplied tags and have data-sharing arrangements to ensure coordination and consistency.

Building on the existing cooperation between the management bodies, the FAO DSF Project is canvassing interest in an online workshop involving scientists, managers and fishing industry involved in fisheries for toothfish in SPRFMO, SIOFA and SEAFO and relevant areas of CCAMLR.

The aim of the workshop is to provide a forum for data and knowledge sharing for the toothfish longline fisheries to promote a shared understanding of assessment approaches being taken in different management bodies. It will also provide an opportunity to identify how data gathered in each of the toothfish fisheries can be brought together to alleviate data-limitations in individual fisheries. Developing this shared understanding may provide opportunities to:

- (i) promote information exchange among the relevant organisations, including on the assessment processes for toothfish that are implemented by each organisation.
- (ii) identify common scientific approaches used to advise management,
- (iii) share insights and experiences of successful assessment approaches,
- (iv) consider harmonised requirements to provide operational consistency for vessels that fish for toothfish.

The workshop is proposed to be online and we welcome expressions of interest from anyone with an interest in any aspect of toothfish fisheries who could contribute to, and hopefully benefit from, the discussions.

The final format and timing for any workshop will depend on the level of interest and the time required for appropriate consultation in the respective management bodies.

1 [CCAMLR is not a DSF Project partner but receives regular updates on DSF Project and the Scientific Committee encouraged continued support for participation in relevant FAO Deep-sea Fisheries Project activities that strengthen coordination and promote alignment in approaches to ecosystem-based fisheries management. (SC-CAMLR-44 paragraph 10.43)]