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FAO Deep Sea Fisheries (DSF) Project- Overview of activities 2022-2026

The Food and Agriculture Organisation (FAO) - Deep Sea Fisheries Project (DSF)

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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. The Project is delivered in collaboration with co-financing partners, including SIOFA.</p> <p>The purpose of this paper is to provide an overview of DSF Project activities from 2022-to present. Activities that have taken place since MoP12 include:</p> <ul style="list-style-type: none">• A workshop on catch reporting of deepwater sharks (see page 5)• Workshop on cross-sectoral interactions with deep-sea fisheries (see page 5)• Online workshop on integrating climate change considerations by RFMOs (see page 6)• Workshop on developing guidance on the implementation of EAFM (see page 7)• Workshop on RFMO communications and outreach (see page 7)• Launch of the digital deepwater shark identification guide (see page 7)• Development of data-limited stock assessment methodologies (see page 7)• Mapping of deep-sea fisheries in the ABNJ (see page 8)• Joint cruise with R/V Nansen in the SIOFA Area (see page 9)	

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² Documents available only to members invited to closed sessions.

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Background

The 'Deep-sea Fisheries (DSF) under the Ecosystem Approach' 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 deep sea fisheries in the areas beyond national jurisdiction (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 co-financing partners 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](#).

2025-2026 project activities relevant to SIOFA

1. PUBLICATIONS AND ONLINE TOOLS

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

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

sustainability. In particular, the recommended adoption of fishery-specific, long-term management plans have not been implemented.

The document can be downloaded at:

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

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>

Deep-sea Fisheries Technical Forum (DGroups community)

The DSF Project has established an online community, the Deep-sea Fisheries Technical Forum, hosted on the DGroups knowledge-sharing platform, as a mechanism to facilitate ongoing collaboration, information exchange and discussion among project partners and the wider deep-sea fisheries community. The platform provides a simple, non-commercial and privacy-respecting environment for sharing DSF-related resources and engaging in technical and governance discussions relevant to the Project.

Key functions of the platform include a shared library for documents and knowledge products, a calendar of upcoming meetings and events, and moderated, email-based exchanges to support information sharing and discussion. Once registered, participants can communicate directly with group members via email without needing to access the platform website.

The Technical Forum represents a valuable resource for SIOFA Members and delegates, providing access to DSF Project outputs, announcements of relevant events and opportunities for cross-RFMO dialogue. SIOFA delegates are encouraged to join the platform and contribute to ongoing knowledge-sharing activities: [Dgroups - Login](#)

2. WORKSHOPS AND SYMPOSIA

Workshop on the Application of the Precautionary Approach to the Management of DSF stocks

The DSF Project convened a virtual workshop to take stock of the application of the precautionary approach (PA) to the management of DSF stocks, and to explore the steps necessary to advance on the development of PA frameworks and/or long-term management plans/harvest strategies for these stocks.

The workshop took place virtually on 15 October 2024, and it was conducted through two identical sessions to accommodate different time zones. There was a total of 87 participants across the two sessions. All partner RFMOs and their Secretariats, as well as the academic, non-governmental and private sector community were represented at the workshop. NAFO contributed to the workshop by presenting its new PA framework, as an example.

Based on the outcomes of this workshop, the drafting of a publication is now underway, which will compile good practices in the application of the precautionary approach to the management of deep-sea stocks, as well as to reducing ecosystem impacts, and collate some recommendations for further guidance. RFMO partners were contacted to submit their good practice examples. More information available on the [Deep-sea Fisheries Technical Forum](#).

Symposium on Applying the Ecosystem Approach to Fisheries Management in ABNJ

The DSF Project, in collaboration with NAFO and the International Council for the Exploration of the Sea (ICES), organized a Symposium on the Ecosystem Approach to Fisheries Management (EAFM), held from 11 - 13 March 2025 at FAO headquarters in Rome, Italy.

The Symposium focused on the implementation of the ecological components of EAFM, including retained species, non-retained (discarded) species, and ecosystem considerations. The Symposium was webcast, with interpretation provided in French and Spanish. The agenda, presentations, and recordings of the Symposium can be viewed at: <https://eafm-symposium.nafo.int/>.

Workshops with the DSF industry

In April 2024, the DSF Project held a workshop with DSF industry operators from across the globe to explore proactive contributions from industry to sustainable DSF. This was followed up with a second workshop (9-10 May 2025, Barcelona, Spain), which aimed to:

I. Allow an open exchange between the DSF Project and deep-sea fishing operators on the following topics:

- Fostering collaboration between industry, scientists and managers for sustainable fisheries
- Deepwater sharks reporting and bycatch mitigation
- Vulnerable marine ecosystems
- Socioeconomic aspects of DSF

- Cross-sectoral interactions with DSF

II. Provide a platform for industry experts to exchange insights, address challenges, and propose proactive solutions for sustainable deep-sea fisheries management;

III. Advance discussions on the terms of reference for a potential industry network of sustainable deep-sea fisheries.

A third workshop was held 24-25 April 2026, with the aim to support the establishment of a global network of sustainable DSF operators. The report of the workshop is currently being finalized, and will be shared with all project partners, including SIOFA.

Workshop on deepwater sharks

The DSF Project held a global workshop on deepwater sharks in July 2025 that considered the following four main themes:

Theme 1. Catch Reporting

Theme 2. Reporting formats

Theme 3. Ecological Risk Assessment for deepwater sharks

Theme 4. Fishing for data

The key outcomes of the workshop included the development of a workplan for:

- * Reviewing FAO FishStat capture-production data on deepwater sharks
- * Developing a global ecological risk assessment for deepwater sharks
- * Developing guidance for the use of ASFIS codes for RFMOs
- * Exploring of opportunities for industry engagement in data collection plan
- * Developing identification materials for deepwater sharks
- * Preparing an FAO Technical Report on the outcomes and the actions arising from the workshop

During the workshop there was a recognition that attempting to improve fisheries catch data collection for all species of deepwater sharks simultaneously presents a seemingly insurmountable task. Therefore, a candidate species list, based on broad selection criteria and expert review, was identified that could be used to advance work on various aspects on deepwater shark catches in the ABNJ. Follow-up work in 2026 will involve the development of RFMO-specific recommendations for improved reporting on the selected 12 species of deepwater sharks, all of which have a global distribution.

More information available on our [Common Oceans website](#), and in the [Deep-sea Fisheries Technical Forum](#).

Workshop on cross-sectoral interactions with deep-sea fisheries

The DSF Project organized a workshop on cross-sectoral cooperation in the ABNJ on 24-26 September 2025 at FAO HQ, which explored the interactions between deep-sea fisheries and two other sectors in the ABNJ, the biodiversity conservation and deep-sea mining sectors. The Project supported the in-person attendance of one representative from a SIOFA Contracting Party.

The workshop explored:

- the nature of cross-sectoral interactions from the perspective of deep-sea fisheries,
 - the science/methodology required to assess the potential impacts resulting from these interactions,
 - the institutional actors, interactions and processes involved and needed to address these impacts effectively and efficiently, and
1. the types and levels of cross-sectoral cooperation mechanisms required to prevent, manage and mitigate these impacts

The workshop outcomes will inform a publication on effective cooperation between dsRFMOs and other key sectors active in the ABNJ to support biodiversity conservation and resource sustainability.

More information available on our [Common Oceans website](#), and in the [Deep-sea Fisheries Technical Forum](#).

Online workshop on climate change

The DSF Project has supported consultancies for NAFO, NEACF, NPFC, and SPRFMO to examine the uptake of climate change considerations by the scientific committees (SC). The reports of these consultancies have now all been completed and submitted to the relevant SC.

The Project then held an online workshop on 14 October 2025, to take stock of the results of the consultancies with the aim to present the common conclusions and recommendations, as well as to identify any next steps required.

All four consultancies agreed that there will be physical and chemical changes in the oceans, and that the consequence of this for RFMOs is that scientific committees may need to receive increased human and financial resources to be able to address these changes. Actions will include predicting the likely changes in fish distributions and the impacts of these on the wider food web and ecosystem, identifying species of high risk to climate change and ultimately, producing “climate-informed” management advice.

Meanwhile, management committees will need to demonstrate their clear commitment to climate change adaptation and response. This will mean considering the adoption of a climate-change response roadmap, which outlines tactical immediate actions and more strategic, longer-term actions.

Looking forward, workshop participants highlighted the need for capacity building for RFMO decision makers, improved communication among scientists and managers, and guidance for the development of RFMO climate change roadmaps in order to progress with the implementation of their climate change resolutions. They reiterated the incredible value of cross-RFMO dialogue to share challenges and brainstorm solutions.

Workshop on developing guidance on the implementation of EAFM for deep-sea RFMOs

The DSF Project held a workshop at FAO HQ, Rome, Italy from 15-16 June 2026 on “Developing guidance for improved implementation of the ecosystem approach to fisheries management, the precautionary approach and climate change considerations by deep-sea RFMOs”. The workshop specifically targeted RFMO managers/decision makers. A separate information paper – MoP-19-INFO-20 – details the outcomes and recommendations from this workshop.

Workshop on RFMO communication and outreach

The DSF Project held a workshop at FAO HQ, Rome, Italy from 17-19 June 2026 on “Strengthening fisheries communications, engagement and outreach, in relation to the sustainable use and conservation of biodiversity in the ABNJ”. This workshop aimed to take stock of current communications and outreach initiatives of RFMOs that manage deep-sea fisheries (deep-sea RFMOs) and identify ways to build on and diversify these initiatives to ensure deep-sea RFMOs’ contributions to sustainable use of fisheries resources and biodiversity conservation are better recognized. The simplest of steps the workshop identified that deep-sea RFMOs could take to broaden their communications and outreach initiatives is to tailor their websites to a broader audience, including featuring some news and updates in simple language, when possible and relevant. Other key take-aways from the workshop will be included in the workshop report, which should be made available to RFMOs by end July 2026.

3. OTHER INITIATIVES

Shark identification key

With financial support from the DSF Project, experts from the Virginia Institute of Marine Science and FAO have developed an intuitive digital identification guide that operates on a PC or tablet, to improve the identification of deepwater chondrichthyans by observers and crew in the Indian Ocean. The key was 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. The key was launched on World Ocean Day, 8 June 2026 (see our [Common Oceans website](#), [LinkedIn](#) and [X](#)) and a link to the app included as a resource for observers on the SIOFA webpage (<https://siofa.org/science/observers-resources>).

Data-limited stock assessments

The DSF Project has been engaging with ICES on supporting and improving data-limited stock assessments - bringing assessment scientists together to discuss their assessments with like-minded experts from other areas, and to learn and to develop or revise methods together. The work plan involves four workshops: WKLIFE XIV which took place in the Azores from 1-5 September 2025; a first workshop on developing methodologies, which took place in Tokyo from 20-24 April 2026; a

second workshop to test methodologies, which will take place in Copenhagen from 28 September to 2 October 2026, and the WKLIFE XV meeting in Copenhagen (7-11 September 2026).

Presentations at WKLIFE XIV included alfoncino and pelagic armourhead assessments in NPFC, SEAFO and SIOFA by Takehiro Okuda, Kota Sawada and Sato Arai; toothfish assessments in SEAFO, SIOFA, SPRFMO and CCAMLR by Takehiro Okuda and Roberto Sarralde; and red crab in SEAFO by Erich Maletzky. The project supported the costs of Kota Sawada and Sato Arai to attend WKLIFE XIV in person. The report of the meeting can be viewed at:

<https://doi.org/10.17895/ices.pub.30464690>

The first workshop aimed to further develop assessment tools applicable to deep-sea fisheries, with relevance to Regional Fisheries Management Organizations and advisory needs. The work was grounded in a Management Strategy Evaluation framework, within which management procedures and data-limited methods will be tested. In this context, the objective was to define principles and practical approaches for constructing operating models that are fit for purpose given the biological and data limitations of deep-sea systems. The report of this workshop can be viewed at:

<https://doi.org/10.17895/ices.pub.32253684>

The outputs of this collective work will be collated in an online, open-access digital platform hosted by ICES, which will provide accessible, transparent, and up-to-date tools and information that describe assessment methods with a focus on data-limited stocks. Assessment methods developers working with SIOFA data-limited stocks can contact the DSF Project for further details.

Mapping of deep-sea fisheries in the ABNJ

Although there are a range of data products that provide global overviews of fishing effort, there is no global overview that provides a consistent view of the spatial extent (distribution) and intensity (effort) of the use of fishing gears likely to come into contact with the seafloor in the ABNJ.

Individual RFMOs provide spatial data on “fishery footprints” that reflect areas in which bottom fishing has taken place, however, these do not show the actual gears or levels of fishing effort taking place in those areas. FAO has been approaching RFMO partners to request fishing effort data by position and gear for fisheries using bottom contact gears to develop a global map of spatial bottom fishing effort. All RFMOs have now consented to this data release. The plan is to publish the consolidated map by the end of 2026.

4. Capacity development

Observer training

The Deep-sea Fisheries Project held an observer training capacity building workshop for SIOFA CCPs from 3-5 December 2024 in Port Louis, Mauritius. The training was attended by five participants from Seychelles, five from Thailand, one from China, one from Cook Islands, and eight participants from Mauritius.

Decent work conditions

FAO, in collaboration with a number of partners, organized an international training course aimed at strengthening labour conditions in the fisheries sector, from 19-23 May 2025 in Isla Cristina, Spain. The course also addressed the importance of advancing decent work conditions on fishing vessels operating in the ABNJ. As part of its commitment to support this work within the context of RFMOs, the Deep-sea Fisheries Project supported six participants to contribute to, and benefit from, the course, including one participant from SIOFA.

Ocean governance

FAO, in collaboration with a number of partners, organized an in-person, global ocean governance workshop from 16-18 June 2025 in Rome, Italy. The workshop brought together 50 ocean governance practitioners from around the world to exchange knowledge and experience. Key thematic areas of the three-day workshop included fisheries, blue economy, environment and biodiversity, marine pollution and climate change. The DSF Project supported the participation of ten government officials from countries member to one or more RFMOs partner to the project, including three participants from SIOFA.

The DSF Project welcomes suggestions or recommendations from SIOFA CCPs for further capacity building activities to be explored during the remaining duration of the project.

Joint cruise with R/V Nansen in the SIOFA Area

The DSF Project, in collaboration with the FAO EAF-Nansen Programme, Norway and SIOFA, organized a three-week research cruise from 20 November to 10 December 2025, in the international waters of the Indian Ocean south of Madagascar onboard the UN-flagged research vessel R/V *Dr. Fridtjof Nansen*.

Twenty scientists from 11 countries mapped underwater landscapes and vulnerable marine ecosystems, identified deep-sea shark species, and studied seabirds and marine mammals. The data collected during the voyage will inform management strategies of SIOFA, support the work of the FAO's EAF Nansen Programme and Common Oceans Deep Sea Fisheries Project, and contribute to global biodiversity initiatives.

More information available on our Common Oceans website [here](#) and [here](#). A separate paper was submitted to the MoP on the cruise (MoP-13-INFO-05).