DOSI
DEEP-OCEAN STEWARDSHIP INITIATIVE

POLICY BRIEF
November 2022

Improving Impact Assessments for Deep-Ocean Bottom Fisheries

Summary

Robust impact assessments (IAs) for deep-sea fisheries are the main tools needed to protect the high seas from the harmful impacts of bottom fishing and to conserve deep-sea biodiversity. Recent research conducted by 30 experts shows that IAs of deep-sea fisheries from different regions are not in compliance with paragraph 47 of the FAO (Food and Agriculture Organisation of the United Nations) International Guidelines for the Management of Deep-Sea Fisheries in the High Seas. **The majority of the IAs conducted to date do not robustly demonstrate that deep-sea fishing activities on the high seas can prevent significant adverse impacts (SAIs) on vulnerable marine ecosystems and are unable to show that fishing is sustainable.** Negotiators can help by:

- Supporting standardisation of IAs across different regions using a shared template.
- Advocating for more vigorous, evidence-based IAs that collect information to share with independent parties for scientific evaluation.
- Supporting the use of a precautionary approach in areas lacking sufficient data to assess the impacts of fishing.

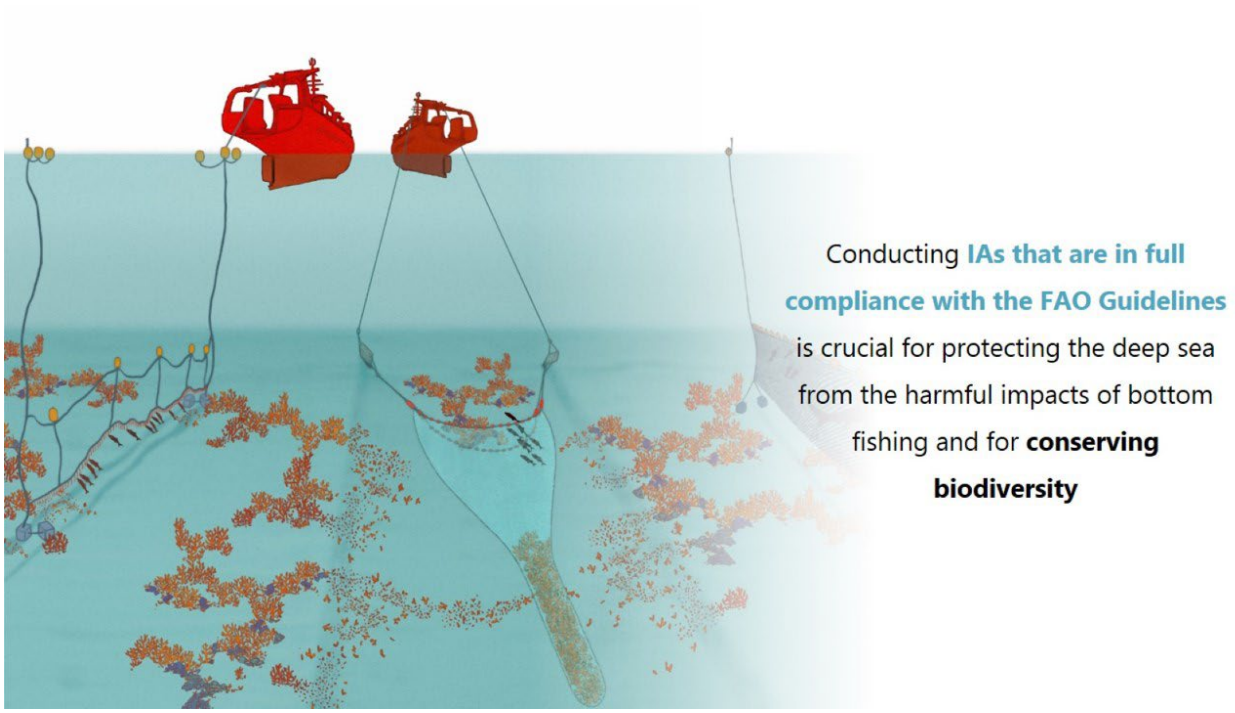

Illustration by Anni Kaikkonen

Background

Deep-sea fishing has several impacts on seafloor ecosystems. The most commonly described impacts include direct disturbance of the seafloor, including: scraping and ploughing of the seabed, removal of most of the benthic fauna from trawling on hard substrate, (Clark *et al.,* 2016); resuspension of sediments which can smother seafloor organisms, and unintentional catch of benthic animals in fishing gear (Kaiser *et al.*, 2019). **The intensity of deep-sea fisheries on the high seas and the impacts on the marine environment call for effective measures to ensure that fishing does not compromise the commitments established for protecting biodiversity in the deep ocean by the United Nations.**

In order to prevent significant adverse impacts (SAIs) on vulnerable marine ecosystems (VMEs), high seas fishing nations have agreed to cease fishing activities where VMEs are known or likely to occur unless the fishing can be managed to prevent SAIs on VMEs. To determine whether fishing activities can be conducted in a sustainable manner that prevents impacts on VMEs, States agreed on criteria for conducting impact assessments (IAs) for deep-sea fisheries through a set of Guidelines negotiated under the auspices of the United Nations Food and Agriculture Organisation (FAO Guidelines). The FAO Guidelines were adopted in 2009 (FAO 2009) and later that year the UN General Assembly (UNGA) expressly committed States to ensuring that bottom fishing is prohibited unless prior impact assessments consistent with the FAO Guidelines have been carried out.

Current Policy and Problems

Despite progress made by States and Regional Fisheries Management Organisations and Agreements (RFMO/As) to conduct IAs, there remain significant gaps in the implementation of the commitments set by the relevant UNGA resolutions and the criteria of the FAO Guidelines. In order to appraise the implementation, in 2022 the Fisheries Working Group of the Deep-Ocean Stewardship Initiative (DOSI), reviewed a selection of IAs for deep-sea fishing on the high seas. The nine selected IAs have either been submitted by RFMO/As, conducted by the RFMO/A itself, or represent an independent evaluation prepared by a fishing nation and were found publicly available. The overall goal of the review was to evaluate the content and consistency of the selected IAs against the science-based criteria established in the adopted FAO Guidelines.

Scientific Understanding

DOSI developed a questionnaire on the basis of the FAO guidelines to evaluate i) how IAs addressed the standards and criteria of the resolutions and ii) whether the documents provided sufficient information to evaluate the impacts of fishing activities on VMEs (see Table 1 on the next page). This systematic approach enabled standard evaluation of the contents and quality of the nine IAs. The shortcomings identified across the reviewed IAs (but not necessarily common to all) include **incomplete description of the proposed fishing activities, inadequate baseline data, and limited consideration of the impacts of fishing.** Assessment of uncertainties is mostly inadequate, because most IAs did not consider the implications of the data gaps or other sources of uncertainty for the final assessment and management decisions. Risk Assessments (RA) are missing in many documents, and if included, the focus of the RA is only on VMEs.

All reviewed IAs suffered from an inadequate presentation of sources of data and the unexplained rationale underpinning assessments of fishing impact. The results also highlight how IAs vary considerably in quality and detail, with little consistency in format and methodological approaches. Data availability, especially with regards to the spatial distribution of VMEs and their composite species, is the key factor impeding comprehensive impact assessments.

Impact assessment	Description of fishing activity	Baseline information	Identification of VMEs	Description of used data and methods	Assessment of potential impacts	Risk assessment	Mitigation measures and monitoring
Cook Islands SIOFA	Partially	No	Acoustic mapping = No	Partially	No	No	Partially
Australia SIOFA	Partially	No	Bathymetry, trawl catches = Partially	Partially	Partially	Partially	Partially
Japan SIOFA	Partially	No	Trawl catches = Partially	Partially	No	No	No
Australia-NZ SPRFMO 2020	Partially	Partially	SDMs, trawl catches = Partially	Yes	Partially	Yes	Partially
Japan NPFC	Partially	Partially	Visual surveys = Partially, small spatial coverage	Yes	Partially	No	Partially
Spain SW Atlantic (no RFMO)	Partially	Yes	Visual surveys, trawl catches, topographical features = Yes	Yes	No	No (N/A)	Partially
NAFO 2021	Yes	Yes	Trawl catches, SDMs = Partially	Yes	Partially	Yes	Partially
Japan SEAFO	Partially	No	Longline catches = No	No	No	No (N/A)	Partially
Spain Gillnet SPRFMO	Partially	No	Bycatch from gillnets = No	No	No	No (N/A)	Partially

Table 1: Information Included in Impact Assessments for 9 IAs. DOSI 2022.

Therefore, the review concluded that the reviewed IAs are likely not in compliance with paragraph 47 of the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas adopted in 2009, as the IAs do not robustly demonstrate that deep-sea fishing activities on the high seas can prevent SAIs on VMES or that fishing is conducted in a sustainable manner. Even the most comprehensive IAs, despite covering certain topics in detail, are not fully compliant with the FAO Guidelines. It is the responsibility of RFMO/As and fishing States to demonstrate that their fisheries are sustainable and can be, or are being, managed to prevent SAIs as a condition of being able to exploit these resources (UNGA resolution 61/105 para. 83; UNGA resolution 64/72 paras. 119 & 120). The FAO Guidelines define SAIs as impacts for which the recovery period exceeds 5-20 years. Presently, there are at least seven scientific studies from seamounts showing that recovery has exceeded this temporal limit (Goode *et al.,* 2020). **If exploitation of deep-sea resources is allowed to continue, the shortcomings illustrated by the reviewed IAs must be addressed.**

Recommendations

The IA review conducted by the DOSI Fisheries Working Group in advance of the UNGA review on bottom fisheries (August 2022) identifies several ways to strengthen the IA process. There are three key ways that negotiators can help with this:

- **Standardise the content of impact assessments** across RFMO/As to assist RFMOs in implementing FAO guidelines and UN resolutions. This can easily be achieved using the template of questions prepared in the DOSI review as a baseline. The IAs should also be independently evaluated to ensure implementation of and compliance with the FAO Guidelines.

- Require management decisions to be based on the **best available information**. Data underpinning the assessment of fishing impacts and forming the basis of risk assessments should be fully presented or the data sources should be indicated. At a minimum, data should be made available upon request for scientific evaluations. Without data, claims that significant adverse impacts do not occur as a consequence of bottom trawling lack evidence.

- **Apply a precautionary approach** in areas where scientific information is lacking until appropriate data are available to assess the impacts of fishing. Currently, deep-sea fisheries only avoid areas where thresholds of VME indicators have been identified in trawl catches.

Conducting robust IAs for deep-sea fisheries is required for the implementation of international commitments, legal obligations, and conservation of fish stocks. These IAs will also set a precedent for managing other human activities in the high seas. Improving their design is crucial, but we already have solutions: The considerable variation in current methods means that by combining the strengths of different IAs, it is possible to produce fully compliant impact assessments. Taking these steps to improve standardisation, information-sharing, and precautions will allow nations to fulfill their legal and moral obligations.

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About DOSI:

The Deep-Ocean Stewardship Initiative is a global network of experts that seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdiction.

How to Cite:

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