Food and Agriculture
Organization of the
United Nations

Fisheries management in the Areas Beyond National Jurisdiction

In recent years, fisheries management, including in areas beyond national jurisdiction (ABNJ), has evolved to become a more holistic management framework. In the ABNJ, legal and policy instruments of particular relevance include the United Nations Convention on the Law of the Sea of 10 December 1982, the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement), and the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas (FAO Deep-sea Fisheries Guidelines)[1].

While the UN Convention on the Law of the Sea provides the fundamental and overarching legally-binding framework for fisheries management in ABNJ, the UN Fish Stocks Agreement elaborates on requirements for the conservation and management of straddling fish stocks and highly migratory fish stocks, particularly in the high seas. The FAO Deep-sea Fisheries Guidelines addresses and provides policy directions on various issues raised in the UNGA resolutions (e.g. UNGA Res. 61/105) in relation to deep-sea fisheries.

[1] LOSC: 1833 UNTS 3; 21 ILM 1261 (1982); UN Fish Stocks Agreement; 34 ILM 1542 (1995); 2167 UNTS 88; FAO. 2009. International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Rome. 73p.

With the adoption of the FAO Deep-sea Fisheries Guidelines, countries and regional fisheries management organizations and arrangements (RFMO/As) have a tool to manage deep-sea fisheries for sustainable use and for the protection of vulnerable marine ecosystems (VMEs) from significant adverse impacts (SAIs). The FAO Deep-sea Fisheries Guidelines include criteria for identifying VMEs and assessing potential impacts of bottom fishing in order to facilitate the adoption and implementation of conservation and management measures by RFMO/As and flag States. Since its adoption in 2008, the FAO Deep-sea Fisheries Guidelines have shaped the regulatory frameworks of the deep-sea RFMO/As. Most deep-sea RFMO/As have adopted measures for managing the expansion of deep-sea fisheries and the protection of VMEs.

An RFMO/A is an intergovernmental organization through which States or economic entities cooperate in developing, adopting, and implementing conservation and management measures. These measures may often target specific species and ecosystems and are binding for applicable RFMO/A members. There is a range of conservation and management measures that address issues covering: area based measures; adverse environmental impacts; fishing effort; total allowable catch or other allocation mechanisms; data collection; and monitoring, control and surveillance (MCS). The conservation and management measures can be extended to non-members through, for example, international treaties such as the UN Fish Stocks Agreement.

Environmental impact assessments (EIAs) in ABNJ

Awareness, both within the fisheries sector and among the public, of the environmental impacts of fishing activities and the need to assess these has been increasing since the United Nations Conference on Environment and Development in 1992. A number of international and regional instruments contain provisions on impact assessments, of which some are important to the deep-sea fisheries ABNJ.[2] For example under the FAO Code of Conduct (1995), the fisheries sector is expected to reduce its impacts in ways that are also compatible with its own sustained existence. The ecosystem approach to fisheries (EAF) includes a risk-based framework to address impacts of fishing, including environmental impacts. In addition, the FAO Deep-sea Fisheries Guidelines contain specific provisions detailing information necessary for an impact assessment in ABNJ deep-sea fisheries.

FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas

The FAO Deep-sea Fisheries Guidelines contain provisions and recommendations for fisheries management in the ABNJ that address impact assessments, among other issues.

> Flag States and RFMO/As should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area. Such an impact assessment should address, inter alia: "...(iv) data and methods used to identify, describe and assessment the impacts of the activity, the identification of gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment..." (Paragraph 47).

[2] An example of these instruments is the Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs) in Marine and Coastal Areas (CBD Decision XI/18B and Annex of UNEP/CBD/COP/11/23). The CBD guidelines are relevant to the conservation of marine biodiversity both within and beyond areas of national jurisdiction and are expected to apply to activities that are currently unregulated and with no procedures for assessing impacts.

Ecosystem Approach to Fisheries (EAF)

FAO has developed technical guidelines for fisheries management focusing on the EAF.[3] These guidelines explicitly address the environmental impacts of fishing activities through a risk-based framework, and call for the development of appropriate management measures where high or moderate levels of risk are identified. FAO has developed an EAF Toolbox that includes tools for applying an EAF for national and local fisheries management authorities, including fishery managers, scientists and other stakeholders and may also have applications for the ABNJ.

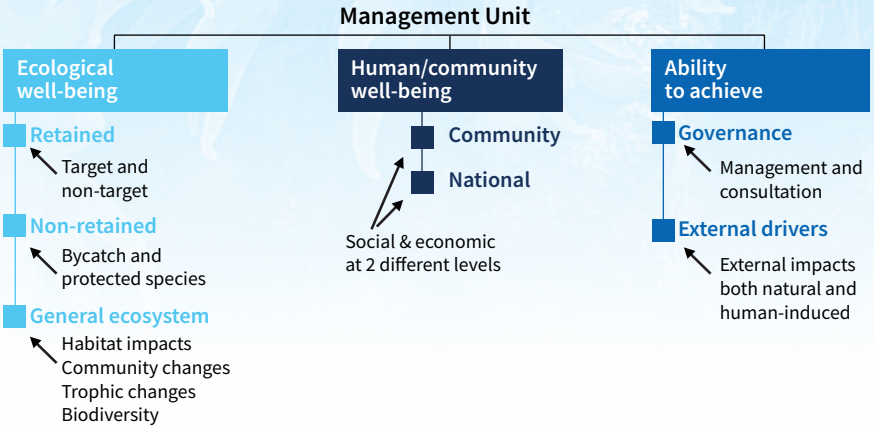
[3] FAO. 2003. Fisheries Management. 2. T*he ecosystem approach to fisheries*. FAO Technical Guidelines for Responsible Fisheries No.4, Suppl.2. Rome. 112 p.

The EAF Toolbox will help users choose tools appropriate to their situation and guide them through the steps for implementing the EAF. You can access the EAF-Toolbox at: http://www.fao.org/fishery/eaf-net/toolbox/en.

Regional implementation

Most RFMO/As that have the competence to regulate bottom fisheries in the ABNJ have developed measures in relation to the identification and protection of vulnerable marine ecosystems (VMEs), as well as procedures for impact assessments and assessment standards in relation to inside and outside of the spatially-defined existing fishing areas.

Step 2 of the EAF Process: Issue Identification



For example, in the South East Atlantic Fisheries Organisation (SEAFO), bottom fishing activities outside of existing fishing areas, or activities using bottom gear not previously used in an existing fishing area, are considered to be exploratory fisheries and are subject to comprehensive impact assessment procedures outlined in the conservation and management measures[4].

[4] Conservation Measure 30/15 on Bottom Fishing Activities and Vulnerable Marine Ecosystems in the SEAFO Convention Area (http://www.seafo.org/Documents).

SEAFO assessment of exploratory bottom fishing activities

Exploratory fisheries shall not commence until the following impact assessment information has been provided to the Executive Secretary by the relevant Contracting Party:

1. A harvesting plan which outlines types of fishing to be conducted, vessel and gear types, fishing areas, target and potential bycatch species, fishing effort levels, and duration of fishing;
2. Best available scientific and technical information on the current state of fishery resources and baseline information on the ecosystems, habitats and communities in the fishing area;
3. Identification, description and mapping (geographical location and extent) of VMEs known or likely to occur in the fishing area;
4. Identification, description and evaluation of of the occurrence, character, scale and duration of likely impacts, including cumulative impacts of a proposed fishery on VMEs in a fishing area;
5. Data and methods used to identify, describe, and assess the impacts of the activity, the identification of the gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment;
6. Risk assessment of likely impacts by the fishing operations to determine which impacts on VMEs are likely to be significant adverse impacts; and
7. Mitigation and management measures to be used to prevent significant adverse impacts on VMEs and the measures to be used to monitor effects of the fishing operations.

The Executive Secretary shall promptly forward this information to all Contracting Parties and the Scientific Committee.

Area-based measures / marine spatial management in ABNJ

Area-based measures and marine spatial tools are commonly used for managing fisheries to protect target stocks and bycatch from excessive impacts. They are tools that have been improved over time as lessons are learned through their implementation. Area-based measures, including in the ABNJ, are tools within the framework of precautionary and ecosystem approaches.

Deep-sea fisheries

Regional bodies with the mandate to manage deep-sea fisheries have implemented spatial measures under which the use of certain gear types, particularly bottom-contact gear, are restricted or banned in order to protect benthic habitats such as vulnerable marine ecosystems (VMEs).

Recommendations on the use of these spatial measures are incorporated into international guidelines such as the FAO Deep-sea Fisheries Guidelines, and most RFMO/As have developed measures in relation to the identification and protection of VMEs.

These measures can be viewed through the VME DataBase[5] which was developed by FAO through its Deep-sea Fisheries Programme[6] in collaboration with RFMO/As, and it hosts information on VME measures and the processes that led to these measures. The VME DataBase contains an interactive map that displays area-based measures and protected areas in ABNJ that have been established by the deep-sea RFMO/As as well as associated fact sheets on these measures and the regional bodies. This VME DataBase complements the recent ICES VME data portal that contains information on VME habitats[7].

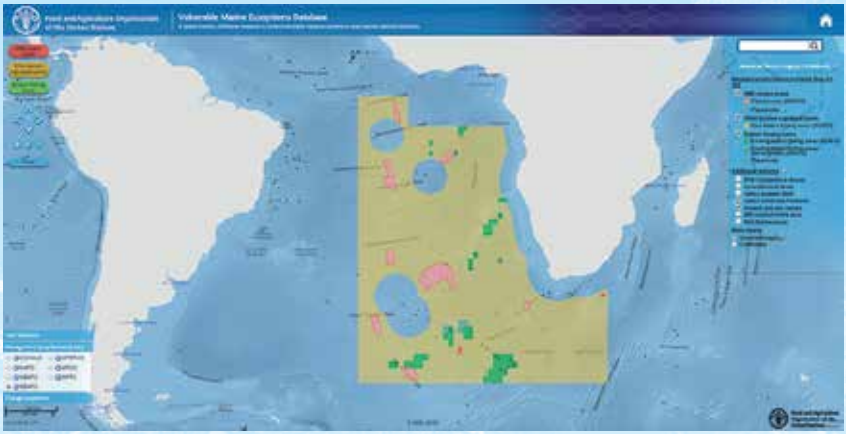
Tuna fisheries

The utility of spatial closures in tuna fisheries is usually less than that for other fisheries, as the tuna are highly migratory in nature and fishing of the resources is

[5] http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/

[6] Supported by France, Norway and Japan

[7] http://www.ices.dk/marine-data/data-portals/Pages/vulnerable-marine-ecosystems.aspx



Screen capture of the VME DataBase, highlighting deep-sea measures implemented by the South East Atlantic Fisheries Organisation (SEAFO) . Access the VME DataBase: www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database

almost exclusively pelagic, therefore, the habitat is not directly affected. However, all tuna RFMOs have, at some point, resorted to area-based management measures to take advantage of specific opportunities provided by temporal heterogeneities in the distribution of the fish.

Of the five tuna RFMOs, the Inter-American Tropical Tuna Commission (IATTC), International Commission for the Conservation of Atlantic Tunas (ICCAT) and Indian Ocean Tuna Commission (IOTC) have introduced time-area closures of for their respective fishery or area-based limits on the use of fish aggregating devices (FADs), primarily to reduce the fishing pressure on small tunas. Some of these management strategies have long histories, such as the annual closures that the IATTC implemented several decades ago when quotas were exceeded. Spatial management also applies to the distribution of fishing effort. The Western and Central Pacific Fisheries Commission (WCPFC) has recently adopted measures that prohibit certain fishing activities within the high seas pockets[8], and limit the fishing pressure allowed in ABNJ of the Pacific Ocean. Other regional arrangements, such as the Parties to the Nauru Agreement, have licensed third party vessels under the condition that they do not fish in the ABNJ area enclosed by their exclusive economic zones (EEZs). There are also area-based measures intended to reduce the incidental mortality of non-target species in all five tuna RFMOs.

[8] WCPFC Conservation and Management Measures 2008-01.

Capacity development and technology transfer in ABNJ

Common Oceans ABNJ Program

The Common Oceans ABNJ Program, which began in 2014, is a five-year programme funded by the Global Environment Facility (GEF) and implemented by FAO, UNEP, and the World Bank in partnership with RFMO/As, NGOs, and the private sector. Focusing on tuna and deep-sea fisheries, in parallel with the conservation of biodiversity, the Common Oceans ABNJ Program aims to promote efficient and sustainable management of fisheries resources and biodiversity conservation in ABNJ to achieve the global targets agreed in international fora. The Program consists of four complimentary projects that bring together governments, regional management bodies, civil society, the private sector, academia and industry.

The Common Oceans ABNJ Program promotes capacity development specifically for ABNJ fisheries and associated biodiversity conservation from tuna fisheries to deep-sea benthic habitats.

Highlights of the Program with respect to capacity development include:

- Communities of practice on fisheries, biodiversity, and climate change and multi-sector area-based planning
- Regional ABNJ Leaders Fellowship Program.
- Capacity building on EAF in deep-sea fisheries.
- Training on legal drafting for sustainable fisheries and biodiversity conservation.
- Capacity development related to ulnerable marine ecosystems (VMEs).
- Capacity-building workshops for officials from tuna RFMO member countries to support the full implementation of the precautionary approach.

- Establishment of a certification-based training programme on MCS in tuna fisheries.
- Supplementing capacity-building efforts in the tuna RFMOs to improve compliance by members.

For more information please visit www.commonoceans.org.

EAF-Nansen

The EAF-Nansen project supports the implementation of the ecosystem approach to fisheries (EAF) management, with focus on the marine fisheries around Africa. The project has a component to increase scientific and management capacity in relation to EAF. It contributes to the enhancement of knowledge through resource and ecosystem surveys in close collaboration with partners using the research vessel *Dr Fridtjof Nansen*. The research vessel operates largely in EEZs of partner countries but also in ABNJ. In 2015, a research cruise was undertaken to survey the seamounts in the ABNJ of the Southeast Atlantic Ocean. Vital data and information on key features and resources of the seamounts were obtained.

The project will enter into a new phase in 2017, with a new reserach vessel, with which opportunities for capacity development and strategic partnerships in support of increased knowledge on marine ecosystems are expanded. More information about the project can be found here: www.fao.org/in-action/eaf-nansen/topic/18004.

FAO FishFinder

The FAO FishFinder project has, over a period of 40 years, been dedicated to improving fish identification by collaborating with taxonomic experts from around the world. FAO FishFinder has produced more than 200 identification guides for commercially fished species are available, as well as a unique and important archive of more than 40,000 scientific illustrations, and distribution maps, taxonomic descriptions, and bio-

logical and fisheries information on more than 8,000 species. The tools developed by FAO FishFinder are essential for developing capacity for accurate sampling and reporting schemes for fisheries catch statistics and biodiversity assessments. Tools of importance to ABNJ include identification guides for deep-sea species such as deep-sea sharks, batoids, chimaeras and invertebrates. More information can be found here: http://www.fao.org/fishery/fishfinder/en.

FAO Deep-sea Fisheries Programme

The FAO Deep-sea Fisheries Programme is a suite of several projects[9] supported by various donors aiming to support the implementation of the FAO Deep-sea Fisheries Guidelines, or associated activities such as the development of the VME DataBase. The FAO Deep-sea Fisheries Programme is providing opportunities for capacity building on key issues relevant to the management of deep-sea fisheries in the ABNJ such as VMEs, resource assessments, impact assessments, management tools, species identification, data collection and reporting as well as providing increased knowledge in relation to deep-sea fisheries and ecosystems. More information can be found here: http://www.fao.org/fishery/topic/16160/en.

[9] **FAO-Norway project** (Support for the implementation of the International Guidelines on the Management of Deep-sea Fisheries in the High Seas); **FAO-GEF ABNJ Deep Seas project** (Sustainable fisheries management and biodiversity conservation of deep-sea ecosystems in the areas beyond jurisdiction); **FAO-Japan project** (Fisheries management and marine conservation within a changing ecosystem context); **FAO-France project** (The Vulnerable Marine Ecosystem (VME) Database); and the **Horizon 2020 SponGES project** (Deep-sea Sponge Grounds Ecosystems of the North Atlantic: an integrated approach towards their preservation and sustainable exploitation of Atlantic marine ecosystems).

Cover background image: Courtesy of NIWA-MPI. Introduction background image, EIAs in ABNJ background image, and other background images, Courtesy of E. Kenchington, Department of Fisheries and Oceans, Canada. Area-based measures map: FAO. Capacity development vessel image: Courtesy of the Institute for Marine Research, Norway.

For more information:

www.fao.org/fishery/en
Or contact: FI-Inquiries@fao.org

I5565E/1/04.16