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DEEP-SEA FISHERIES AND VULNERABLE MARINE ECOSYSTEMS (VMEs); GLOBAL AND REGIONAL PERSPECTIVES; CONSIDERATIONS FOR THE CECAF REGION

SUMMARY

Deep-sea fisheries are often considered to be those fisheries that occur beyond and below the continental shelf break (i.e. on the continental slopes and below), or in association with isolated oceanic topographic structures such as seamounts, ridges and banks. These fisheries, and in particular those fisheries that occur in Areas Beyond National Jurisdiction (ABNJ) have attracted increased attention worldwide in recent years. A particular focus has been of those fisheries conducted by bottom trawling in these areas, and the sustainability of these fisheries and the potential impacts on biodiversity have been the focus of discussions in many international fora, including in the United Nations General Assembly. In 2008, the International Guidelines for the Management of Deep-sea Fisheries in the High Seas were adopted and provides guidance to RFMO/As and States.

INTRODUCTION

1. Deep-sea fisheries are often considered to be those fisheries that occur beyond and below the continental shelf break (i.e. on the continental slopes and below), or in association with isolated oceanic topographic structures such as seamounts, ridges and banks. The types of fishing gears and vessels vary greatly depending on the species targeted and their behavior, and include longlines, bottom trawls, midwater trawls, gillnets and traps/pots, but also pelagic gears such as purse seines and mid-water trawls for the pelagic species.
2. The precise definition of what constitutes “deep-sea” fishing varies but it is often meant to refer to any fishing activities below 200m depth in the ABNJ. There are well-

established deep-sea fisheries in many parts of the world catching many different fish species.

3. These fisheries, and in particular those fisheries that occur in ABNJ have attracted increased attention worldwide in recent years. A particular focus has been of those fisheries conducted by bottom trawling in these areas, and the sustainability of these fisheries and the potential impacts on biodiversity have been the focus of discussions in many international fora, including the United Nations General Assembly.
4. Although the species targeted by deep-sea fisheries covers a diverse range of different life histories and productivity rates, those that have given rise to most concerns are fisheries that affect the most vulnerable species (e.g. those that are long-lived, slow growing and with lower productivity) and that are conducted with gears that may have an impact on the bottom habitat (in particular trawling).
5. The legal framework for managing the ABNJ is the 1982 United Nations Convention of the Law of the Sea (LOSC). On the regulation of fishing in the ABNJ, the LOSC provides basic requirements including the obligation to cooperate in the management of fisheries, the control of nationals fishing in the area, and the effective monitoring and control of flagged fishing vessels. States engaged in fishing in the ABNJ must cooperate in the conservation and management of marine living resources and negotiate with the view to taking management measures necessary for the conservation of marine living resources and, as appropriate, establish subregional or regional fisheries organisations. States are also required to take necessary measures against their nationals for the conservation of living resources of the high seas. In addition, the LOSC provides a general obligation to protect and preserve the marine environment and towards this end requires all States to cooperate in formulating rules, standards and recommended practices and procedures for the protection of the marine environment. Elaborating on the provisions of the LOSC is the 1995 UN Fish Stocks Agreement. Among other matters, the Fish Stocks Agreement provides the enabling framework for the management of straddling fish stocks and associated species and introduces contemporary principles for the conservation and management of fisheries.
6. A suite of soft law or voluntary instruments provide regulatory details for the management of these fisheries, including the FAO *International Guidelines for the Management of Deep-sea Fisheries in the High Seas* (DSF Guidelines). Moreover, the United Nations General Assembly (UNGA) leads important global processes affecting DSF management and biodiversity conservation in the context of its annual resolutions on oceans and sustainable fisheries, and has passed a series of resolutions addressing the sustainable management of fisheries and the conservation of marine biodiversity in the ABNJ.
7. With respect to marine biodiversity, the passing of the UNGA resolution 61/105 (2006) called upon States and RFMO/As to protect marine biodiversity in the ABNJ and first introduced the concept of vulnerable marine ecosystems (VMEs). The resolution also addressed the protection of VMEs from significant adverse impacts (SAIs) from bottom fishing practices. Specifically the resolution calls on “States to take action immediately, individually and through Regional Fisheries Management Organizations or Associations (RFMO/As), and consistent with the precautionary approach and

ecosystem approaches, to sustainably manage fish stocks and protect Vulnerable Marine Ecosystems (VMEs)” (paragraph 80).

8. The passing of the above resolution triggered a series of consultations on deep-sea fisheries led by the FAO that culminated in the adoption in 2008 of the DSF Guidelines. The DSF Guidelines provide a framework for supporting sustainable DSF and safeguarding marine living resources and their habitats from significant adverse impacts from deep-sea fisheries. The DSF guidelines also include guidance on the identification of VMEs through providing information on a set of five VME criteria and guidance on associated management measures to protect VMEs from SAIs. Although the DSF Guidelines are voluntary, they have been used to inform the relevant conservation and management measures of States and regional fisheries organizations responsible for the management of deep-seas fisheries.
9. At the regional level, many RFMO/As with the mandate to manage demersal fisheries have initiated implementation of the above UNGA resolution and the DSF guidelines including addressing conservation of VMEs from significant adverse impacts. The RFMO/As rely on the best scientific information available to develop their management measures and implement the relevant components of the UNGA resolutions and Deep-sea Guidelines.

DEEP-SEAS FISHERIES IN THE CECAF AREA

10. Historically in the CECAF region, there are no well-developed deep-sea fisheries in the ABNJ, but some countries report catches for deep-sea species in some of the CECAF Statistical Areas.
11. Species include alfonsino, black scabbardfish, hake, and deepwater shrimp among others, although limited information is available from fisheries in ABNJ, or on the proportion of the catch caught in the ABNJ.
12. There is some potential for these fisheries to grow, and given that CECAF’s mandate includes the ABNJ it could be opportune for the Scientific Committee to discuss and share information on recent developments in deep-sea fisheries and biodiversity conservation in the CECAF area, to reflect upon how CECAF can support sustainable management of these fisheries and conservation of associated biodiversity in accordance with the UNGA resolutions and DSF Guidelines and also how CECAF can benefit in this respect from FAOs work in supporting the implementation of the DSF Guidelines.

The ABNJ DEEP SEA FISHERIES PROJECT

13. The *Sustainable Fisheries Management and Biodiversity Conservation of Deep Sea Living Resources in Areas Beyond National Jurisdiction* Project (ABNJ Deep Seas Project for short) is a five-year project supported by the Global Environment Facility (GEF), and implemented jointly by the Food and Agriculture Organization of the United Nations (FAO), and the United Nations Environment Programme (UN Environment). The UN Environment project component is executed through the UN Environment World Conservation and Monitoring Centre (UNEP-WCMC).

14. The Project is designed to enhance sustainability in the use of deep-sea living resources and biodiversity conservation in the areas beyond national jurisdiction (ABNJ) through the systematic application of an ecosystem approach. It brings together over 20 partners who work on deep-sea fisheries and conservation issues in the ABNJ globally. The Project aims to:
 - strengthen policy and legal frameworks for sustainable fisheries and biodiversity conservation in the ABNJ deep seas;
 - reduce adverse impacts on VMEs and enhance conservation and management of components of EBSAs;
 - improve planning and adaptive management for deep-sea fisheries in the ABNJ; and
 - develop and test methods for area-based planning.
15. Project components 1, 2, and 3 are led by the FAO, and Component 4 is led by UNEP-WCMC.
16. The ABNJ Deep-Seas Project is a five-year project. The total budget for the Project is US\$ 87 million, of which US\$ 7million is funded by the Global Environment Facility (GEF). The remaining US\$ 79 million represent the co-financing from the project's 20 main stakeholders.
17. More information is available from <http://www.fao.org/in-action/commonoceans/en/>.
18. Within FAO, the ABNJ Deep Seas Project is an integral part of the Deep-sea Fisheries Programme and many of the activities have contributed to or benefited from co-financing with other projects under the programme. Some of these projects are now phased out, and follow-up activities are managed through the ABNJ Deep Seas Project.

PROJECT ACTIVITIES OF POTENTIAL INTEREST TO CECAF

19. In December 2014 FAO launched a **global VME portal and database** (<http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/>), which contains VME-related information and an interactive map for the deep-sea RFMO/As, showing the VME closures and other spatial measures of the region. As such it is a compilation of information on management measures taken to reduce current or potential impact on areas where VMEs are known or likely to occur. The VME database was developed in collaboration with the regional bodies with mandates to manage deep-sea fisheries in ABNJ.
20. The **DataBase** is designed to facilitate the work of scientists and managers working on these fisheries and also to promote transparency and accessibility of work that has been done in relation to VMEs to the general public.
21. The database was developed specifically in response to a request from the UN General Assembly (61/105, paragraph 90) to create a database of information on vulnerable marine ecosystems (VMEs) in ABNJ. It has been developed within the FAO Deep-sea Fisheries Programme to promote the use of the International Guidelines for the Management of Deep-Sea Fisheries in the High Seas that provides guidance to States and RFMO/As to ensure the long-term conservation and sustainable use of marine living resources in the deep seas. This includes preventing Significant Adverse Impacts

on VMEs.

22. FAO has held a number of **VME regional meetings** in cooperation with RFMO/As. In general, the VME regional meetings address the Deep-sea Guidelines and share experiences from other regions on VMEs. In November 2016 a meeting on deep-sea fisheries and VMEs was held in Dakar, Senegal for the CECAF region¹.
23. **The VME Processes and Practices**² publication is a working document that details the experience of each regional body managing deep-sea fisheries and VMEs. The report is intended to provide an overview of the processes and practices in each region to facilitate the sharing of experience and, in general, improve general knowledge on the processes. The publication contains a chapter on the eastern central Atlantic and it details the CECAF mandate and the bottom fisheries and VMEs of the region. This publication provides a baseline overview of the CECAF region in relation to bottom fisheries and VMEs, and may inform new activities on these in the region.
24. In 2009 FAO published the *Worldwide review of bottom fisheries in the high seas*. The review was prepared in response to a request by the FAO Committee on Fisheries (COFI) and is a summary of the current status of high seas bottom fisheries worldwide. The review is based on best available information for 2003 – 2006, gathered from a questionnaire circulated to 40 countries and regional bodies. An update to the first review is planned for 2016, and as before the information gathered will be via questionnaire, and cover data from 2007 – 2014. The 2nd review will also address information gaps identified in the first review. There is scope to include a chapter on the central eastern Atlantic region, and the proposed DSF and VME meeting mentioned above will be designed so to seek to provide additional information for this review from the CECAF region. The chapter has been provided to the SSC for review and comment.
25. **Monitoring, Control, and Surveillance for deep-sea fisheries**. The project has completed a review of regional and international MCS frameworks and requirements for deep-sea RFMO/As. The review will be the basis for a MCS workshop planned for December 2018 for SIOFA and SEAFO members. SEAFO and SIOFA members will be invited to review their MCS frameworks in light of the report, identify gaps in their MCS frameworks and develop plans of actions to address the gaps.
26. **DEEP-FLIP training on international instruments relevant to deep-sea fisheries and associated biodiversity**. The project has partnered with legal consultants to develop a step-wise guide for the integration of international legal instruments related to deep-sea fisheries and biodiversity in the ABNJ into national legislation of selected pilot countries. These workshops will target representatives and/or fisheries managers from these countries, and training will be conducted on the use and application of the step-wise guide. The first DEEP-FLIP training workshop is planned for 20-22 October in Thailand, with selected countries from the SIOFA and SEAFO regions.
27. In 2012, a workshop was held to review the assessment and management of alfonso species (*Beryx* spp.), which culminated in a report that will be available by the end of

¹ <http://www.fao.org/3/a-i7609b.pdf>

² <http://www.fao.org/3/a-i5952e.pdf>

2015. The information of this report may be useful for CECAF, given the historical alfonso catches of the region. A similar meeting is planned for 2016 focusing on orange roughy. CECAF members are invited to inform of species of their interest that may merit such a dedicated review in the future.

28. ***Species identification guides*** for deep-sea species such as sharks to be used onboard by observers or crew have been developed, including for the Southeast Atlantic region. A training in taxonomy and the use of the guide was organized in June 2015 in Cape Town, where six scientists from the CECAF area (Angola, Nigeria, Senegal, Mauritania, Cabo Verde) area also participated. Other guides and identification products focusing on vulnerable groups such as Sponges and Corals are also under development.
29. **A data collection manual** for deep-sea species is being produced and will be published by early 2016. This will supplement existing observer manuals and will be useful for those vessels operating in areas without RFMO technical support or without full observer coverage on data collection to meet new data collection requirements. The manual is written for a variety of users such as observers, scientists and non-scientists.

CONSIDERATIONS FOR THE SSC

30. The Scientific Sub-Committee is invited to review and provide comments to Information Documents 5 and 6. Sub-Committee members are kindly requested to share the chapters with relevant experts in their countries and provide comments to FAO.
31. The Scientific sub-committee is invited to discuss and provide information on DSF in the CECAF area, including in the ABNJ and to discuss relevant information and research in support of conservation measures to protect VMEs.
32. Finally, it is asked to reflect upon deep-sea species subject to fisheries that may merit attention for future global (or regional) reviews.