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COMMITTEE ON FISHERIES

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MANAGEMENT OF DEEP-SEA FISHERIES IN THE HIGH SEAS

INTRODUCTION

1. Subsequently to the realization of DEEP SEA 2003, an International Conference on Governance and Management of Deep-Sea Fisheries¹, the twenty-sixth session of Committee on Fisheries (COFI) discussed in 2005 the challenge of managing deep-sea demersal fisheries in the high seas. The Committee highlighted the need for:

- a. collection and collation of information concerning past and present deepwater fishing activities;
- b. undertaking an inventory of deepwater stocks and an assessment of the effects of fishing on deepwater fish populations and their ecosystems;
- c. convening technical meetings to develop a code of practice/technical guidelines; and
- d. reviewing legal framework needed to support conservation and management of deepwater fisheries.

The issue of high seas bottom fisheries and their impacts on vulnerable marine ecosystems (VMEs) was thereafter the subject of extensive negotiation in the United Nations General Assembly (UNGA). The UNGA adopted Resolution 61/105 on Sustainable Fisheries in December 2006. The Resolution calls on flag States and regional fisheries management organizations or arrangements (RFMO/As) to take action immediately, both individually and through RFMO/As, to sustainably manage fish stocks and protect vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold-water corals, from destructive fishing practices. Furthermore, the Resolution calls on States and RFMO/As to manage bottom fisheries on the high seas through assessing the impacts of individual bottom fishing activities, by preventing significant adverse impacts on vulnerable marine ecosystems, closing areas of the high seas to bottom fishing where vulnerable marine ecosystems are known or likely to occur unless fisheries

¹ FAO. Report on DEEP SEA 2003, an International Conference on Governance and Management of Deep-Sea Fisheries. Queenstown, New Zealand 1 - 5 December 2003. *FAO Fisheries Report*. No. 772. Rome, FAO, 2005. 84p.

in these areas can be managed to prevent significant adverse impacts, and ensuring the long term sustainability of deep-sea fish stocks. (paragraphs 80 to 91 in the Resolution).

2. Acting on the requests contained in this Resolution, the twenty-seventh session of Committee on Fisheries (COFI) agreed in March 2007 that the Food and Agriculture Organization of the United Nations (FAO) should convene an expert consultation to prepare draft technical guidelines including standards for the management of deep-sea fisheries in the high seas, to be finalized at a technical consultation. This timing was to allow regional fisheries management organizations or arrangements (RFMO/As) and flag States to develop measures by the deadline of 31 December 2008, as required by the Resolution.

3. It was agreed that the FAO International Guidelines should include standards and criteria for identifying vulnerable marine ecosystems beyond areas under national jurisdiction and the impacts of fishing activities on such ecosystems, in order to facilitate the adoption and the implementation of conservation and management measures by RFMO/As and flag States (pursuant to paragraphs 83 and 86 of the Resolution). COFI also agreed that FAO should continue its work on biodiversity mapping and follow requests in UNGA Resolution 61/105 to create a global database on vulnerable marine ecosystems in areas beyond national jurisdiction, as well as create a list of authorized vessels engaged in high seas deep-sea fisheries.

DEEP-SEA FISHERIES IN THE HIGH SEAS

4. 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). However, no rigid definition of deep sea has been agreed upon and often varies widely depending on the area and fishery. The FAO capture database reports that global catch of deep-sea species grew to 3.6 million tonnes in 2003 and then dropped to 3.3 million tonnes in 2006 (FAO, 2008). This figure includes the 133 species classified as deep-sea by FAO according to their biological characteristics², but comprises species caught both within and outside of nation's exclusive economic zones (EEZs) and is not specific to those species caught with bottom gears.

5. Deep-sea fisheries in the high seas specifically relate to those fisheries which are undertaken in the deep seas and beyond national jurisdiction. Obtaining data specific to such fisheries is difficult both as a result of the way the FAO Fishing Areas were designed in the 1950s before the evolution of the law of the sea and the establishment of EEZs and of the fact that most reporting countries do not or are unable to differentiate between catches made within or beyond national jurisdiction.

6. Deep-sea fisheries typically target demersal and benthic-pelagic species. Many, but not all, of the species targeted or incidentally caught in these fisheries are long lived, slow-growing or late maturing species that can sustain only low exploitation rates. Many of these fisheries are conducted on isolated oceanic topographic structures such as seamounts, ridge systems and banks but also in the deep superjacent waters lying above the continental slopes. Fishing for these species is often conducted using fishing gears which either contact or are likely to contact the seafloor during the course of fishing operation.

7. It is in relation to the latter point that the issue of potential impacts of fishing on VMEs has been raised. Vulnerability is a property of an ecosystem (or of one of its components) in relation to a specific human activity, such as a particular form of fishing with a certain gear design and mode of operation. Fishing activities differ not only qualitatively but also in the intensity of the fishing. Particular ecosystems are likely to show increasing vulnerability when fishing intensity increases, though the relationship may not be linear and proportional but rather a stepped

² Garibaldi, L. and L. Limongelli, 2003. Trends in Oceanic captures and clustering of large marine ecosystems: two studies based on the FAO capture database. *FAO Fisheries Technical Paper No. 435*. Rome, FAO. 71p.

relationship with abrupt changes once thresholds are crossed. Ecosystems identified as particularly vulnerable include, for example, sponge-dominated communities, coldwater corals, and seep and vent communities. These are often associated with topographical, hydrophysical or geological features such as, for example, summits and flanks of seamounts, hydrothermal vents and cold seeps.

8. Today, deep-sea fisheries utilizing bottom gears in the high seas are exploited by a fleet estimated to be between 271-297 vessels, which largely consists of trawlers. Total global catch from these fisheries is estimated, from a preliminary calculation, at a minimum to be 200 376 tonnes.³

9. The particular concerns and challenges related to the management of deep-sea fisheries in the high seas include the vulnerability of low productivity stocks, the vulnerability of the habitats, gaps in the international legal regimes and insufficient coverage by monitoring, control and surveillance. In answer to these difficulties in management and the associated requests by COFI and the UNGA, FAO led an international process to develop the International Guidelines on the Management of Deep-sea Fisheries in the High Seas (the FAO International Guidelines).

10. Existing RFMOs, as well as those under negotiation, are now developing measures to implement the guidance provided through the UNGA Resolution and the FAO International Guidelines. For areas where RFMO/As do not exist, some measures implemented by either States, the European Community or industry have been adopted to address management and conservation on an interim basis.⁴

OVERVIEW OF DEEP-SEA FISHERIES ACTIVITIES COORDINATED BY FAO

The FAO International Guidelines

11. In order to gain an overview of the components that required consideration in developing the FAO International Guidelines for the management of these fisheries, an initial set of activities was undertaken. These activities led to the initial draft of the FAO International Guidelines.

- an Expert Consultation on Deep-sea Fisheries in the High Seas (Bangkok, Thailand 21–23 November 2006)⁵, which provided an initial review of issues on the topic and identified gaps in knowledge and capacity; and
- a Workshop on Vulnerable Ecosystems and Destructive Fishing in Deep-sea Fisheries (Rome, 26–29 June 2007)⁶ to clarify issues of vulnerability, destructive fishing and adverse impacts.

12. In drafting the initial text of the FAO International Guidelines and negotiating a final text, another set of activities were undertaken:

- an Expert Consultation on International Guidelines for the Management of Deep-sea Fisheries in the High Seas (Bangkok, Thailand 11–14 September 2007)⁷, where an initial draft of the FAO International Guidelines was amended.
- a Workshop on Knowledge and Data on Deep-sea Fisheries in the High Seas (Rome 5–8 November 2007)⁸, where the FAO International Guidelines were discussed in relation to improving data issues and the *World Wide Review of Deep-sea Fisheries* was reviewed;

³ Please note that these figures represents information reported to the FAO for the World Wide Review of Bottom Fisheries in the High Seas only and does not include vessels which fish on the high seas of the Mediterranean or central Atlantic. In addition, IUU fishing is known to occur, but its magnitude remains unknown.

⁴ Further information on closed areas in the high seas can be found at: <http://www.fao.org/fishery/topic/16204/en>

⁵ FAO Fisheries Report No. 838

⁶ FAO Fisheries Report No. 829

⁷ FAO Fisheries Report No. 855

⁸ FAO Fisheries Report No.860

- a Skippers and Fleet Managers Workshop on the International Guidelines (25–29 May 2008)⁹, which discussed trawl industry perspective on the FAO International Guidelines; and
- lastly, two sessions of a Technical Consultation on the International Guidelines for the Management of Deep-sea Fisheries in the High Seas (Rome, 4–8 February and 25–29 August 2008)¹⁰, where the FAO International Guidelines were reviewed and finalized.

13. The FAO International Guidelines, as finalized on 29 August 2008, describe key concepts – the characteristics of species exploited by deep-sea fisheries, vulnerable marine ecosystems and what constitutes significant adverse impacts on these ecosystems. Furthermore, the document identifies key management considerations, including the adoption by States and RFMO/As of measures necessary to ensure the conservation of target and non-target species, as well as the identification of areas or features where VMEs are known or likely to occur. The management of such fisheries in areas where no competent RFMO/A yet exists are addressed, as well as the overarching importance of an effective governance framework. The FAO International Guidelines describe management and conservation steps that need to be taken within such a framework. Components of a good data collection and reporting regime are noted, as well as the need for reliable data for stock assessment.

14. Criteria necessary for the identification of vulnerable marine ecosystems and assessment of significant adverse impacts are listed, as well as the information which an impact assessment should contain. Monitoring, compliance and surveillance frameworks are outlined, as well as other key components of an effective enforcement and compliance regime. A description of an appropriate regulatory framework and the related management and conservation measures necessary to manage these fisheries is included in the FAO International Guidelines, which also stress the importance of assessment and review processes for the effectiveness of these measures. The importance of assistance for developing countries, as outlined in the FAO Code of Conduct is emphasized. Lastly, the FAO International Guidelines provide examples of potentially vulnerable species groups, communities and habitats, as well as of features that potentially support them.

Review of Bottom Fisheries

15. Together with the above activities, a Worldwide Review of Bottom Fisheries in the High Seas (WWR) was carried out and its results published. The primary objective of the document containing the review is to present the “current picture” of high seas bottom fisheries by reviewing data from the 2003 to 2006 period. Establishing such a knowledge baseline has been vital for the development of the FAO International Guidelines as it provides an initial overview of deep-sea fisheries in the high seas. The WWR will also provide information that will assist in the implementation of the FAO International Guidelines, as well as providing overall background information important for the management of these fisheries.

16. The WWR focuses on nine regions. The Atlantic Ocean is divided in four: North East Atlantic, North West Atlantic, South East Atlantic and South West Atlantic. No review was carried out for the Eastern and Western Central Atlantic regions as little information was found regarding high seas bottom fishing grounds in these two regions. A regional review was also prepared for the Mediterranean, where the scope was reduced to the deep-sea bottom fisheries targeting resources outside the continental shelf, at depths greater than 400 metres due to the difficulty in identifying high seas fisheries. In the Pacific Ocean, two reviews are presented: the North and South Pacific Ocean. A single review covers the Indian Ocean, and the last regional review concerns the Southern Ocean.

Biodiversity Mapping

⁹ FAO Fisheries and Aquaculture Circular No. 1036.

¹⁰ FAO Fisheries Report No. 881

17. FAO has, for the last 40 years, conducted work on the mapping of fisheries resources under the Species Identification and Data Programme (SIDP) which constitutes a key element in biodiversity mapping. SIDP has published a large collection of documents (synopses, catalogues, field manuals), including maps representing species geographic distribution. The published information by SIDP concerning species living in the high seas was compiled at a time when knowledge of these species was quite poor and data was outdated, better mapping of these resources will require a major update. Although SIDP's products are highly recognized and appreciated, this programme lacks funding and its pursuit beyond 2008 depends on Members responses to calls for extra-budgetary support.

18. The FAO reform process stresses the need for re-centring efforts on its core mandate and priorities, as well as focussing on its comparative advantages and developing partnerships with institutions having complementary strengths. FAO has been strengthening its collaboration with such institutes and organizations, in particular those which have core mandates on biodiversity such as United Nations Environment Programme (UNEP), the Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), World Fish Center, International Union for Conservation of Nature (IUCN), and the Census of Marine Life (CoML) in relation to, among other activities, biodiversity mapping and the development of a global database on vulnerable marine ecosystems. A project concept note for such database, including the possible role of the above mentioned organizations in knowledge development, is being finalised. In addition, FAO has been collaborating with institutions such as the WorldFish Center within the framework of the D4Science project, which aims at developing internet based infrastructures for combining fisheries and bio-geography data.

Linkages with ongoing activities

19. There are some important limitations in the use of the High Seas Vessel Register that was established in the framework of the 1993 FAO Compliance Agreement, due mainly to its lack of specificity (i.e. no fields that list gear types, etc), limited country coverage and accessibility limitations. Some of the necessary information on vessels that are authorized to fish in the high seas can be found in the authorized vessel lists established by individual RFMOs. However, such lists are area specific and are not always publicly accessible.

20. It is expected that the legally-binding instrument being elaborated by the FAO Technical Consultation to draft a legally binding instrument on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing as described in COFI/2009/6, will provide minimum standards for countries and regional fisheries management organizations to take such measures and harmonize them as appropriate, including in relation to information requirements on fishing activities and port inspections. In this way, countries that implement the port State measures will also contribute to the close monitoring of deep-sea fishing activities.

21. The Development of a Comprehensive Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels, addressed under Agenda Item 8 (COFI/2009/6), has been the subject of an Expert Consultation and its future progress is to be considered by COFI. The Expert Consultation recommended that the Global Record take the form of a global portal with links to other databases, and that it should be able to access an array of information about vessels for combating illegal, unreported and unregulated fishing and other purposes. The scope of the Global Record and possible links with high seas deep seas authorized vessel lists and other lists remain open to consideration.

REQUESTS TO FAO IN THE FAO INTERNATIONAL GUIDELINES

22. Through the adoption of the FAO International Guidelines, FAO was requested to carry out a number of supporting activities. The bullet points below are extracted from the FAO International Guidelines and list the primary requests of activities for FAO to lead or undertake. Deep-sea Fisheries (DSF) as mentioned in the following extracts of the FAO International

Guidelines relate to fisheries beyond areas of national jurisdiction and which are characterized by the total catch comprising species that can only sustain low exploitation rates and the use of fishing gear which is likely to contact the seafloor.

23. Development of support tools

- FAO should provide support to the development and coordination of national and international training programmes for fishers and scientific observers, used to improve catch identification and biological data collection, including the use of existing FAO material for the identification of commercial species, and the development of field manuals for the identification of non-commercial species, particularly for benthic invertebrates. (paragraph 36)
- States and RFMO/As should collaborate through FAO and other relevant organizations to address common issues such as the development of compatible standards, tools and information aimed at facilitating the implementation of these Guidelines. (paragraph 86)

24. A global VME database

- Pursuant to UNGA Resolution 61/105 and the agreement reached at the twenty-seventh session of COFI, States and RFMO/As should provide appropriate assistance and support for FAO to develop a global database on VMEs in areas beyond national jurisdiction, in cooperation with other relevant organizations. (paragraph 87)
- As a necessary step towards the identification of VMEs, States and RFMO/As, and as appropriate FAO, should assemble and analyse relevant information on areas under the competence of such RFMO/As or where vessels under the jurisdiction of such States are engaged in DSFs or where new or expanded DSFs are contemplated. (paragraph 44)

25. Support for areas where no competent RFMO/A currently exists

- Where a RFMO/A does not exist, States should submit data on DSFs (at the appropriate resolution for stock assessment and evaluation of impacts of fisheries on VMEs) directly to FAO. (paragraph 34)
- For areas not regulated by a RFMO/A, States should, on an annual basis, submit their impact assessments as well as any existing or proposed conservation and management measures to FAO, which should make them publicly available. (paragraph 52)
- For areas where RFMO/As do not exist, States should submit vessel register or record data on at least an annual basis to FAO together with information on the measures they have adopted to regulate the activities of such vessels. RFMO/As and FAO should make such data and information publicly available by FAO Statistical Area. (paragraph 57)
- For areas not covered by RFMO/As, each flag State should develop comprehensive maps showing the spatial extent of existing fisheries and cooperate with other States concerned and FAO in developing joint maps for relevant areas. (paragraph 64)

26. Capacity building and review

- States, RFMO/As, the United Nations system, including FAO, the United Nations Development Programme, and other relevant inter-governmental and non-governmental organizations, and financial institutions should assist developing countries in implementing these Guidelines and the actions called for in paragraphs 83-91 of UNGA Resolution 61/105. (paragraph 84)
- FAO should, based on biennial reports from States and RFMO/As, review the progress made in the implementation of these Guidelines. (paragraph 88)

27. FAO has developed a programme and is seeking financing for some of these activities. The programme has four main components: support tools for the implementation of the FAO International Guidelines, a vulnerable marine ecosystem database, support for management activities in areas without RFMO/A regulation, and global coordination fora and capacity

building. The programme was submitted to the Global Environment Fund (GEF) for co-financing of some of these components.

28. Other initiatives are also being undertaken by various international institutions and organizations with the aim of identifying VMEs and ecologically and biologically sensitive areas. Members of the Convention on Biological Diversity, at its Conference of the Parties in May 2008, adopted scientific criteria for identifying ecologically and biologically significant marine areas in need of protection in open-ocean waters and deep-sea habitats (COP 9, Decision IX/20). A need for coordination of these various initiatives has been identified and initial discussions have been initiated between FAO and CBD, IUCN and UNEP, and others.

SUGGESTED ACTION BY THE COMMITTEE

29. The Committee is invited to reflect and offer comments as well as guidance on the desired next steps in light of the work that has been completed. Such guidance is requested specifically in respect to coordination amongst international institutions, organizations and industry to minimize impacts of fishing in the high seas especially through research, development, training and awareness raising. Finally, the Committee is requested to provide direction on the next steps that should be taken by FAO to assist with the implementation of the FAO International Guidelines, including, in particular, the question of its funding.