

**Science Working Group  
Viña del Mar, Chile: 21-29 October 2010**

**SWG-09-DW-01**

**BOTTOM FISHERY IMPACT ASSESSMENT STANDARD  
CHILEAN PROPOSAL: SECTION FOR NEW/EXPLORATORY FISHERIES**

**8. Bottom Fishery Impact in New or Exploratory Fisheries**

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FAO document "International Guidelines for Management of Deep-Sea Fisheries in the High Seas" (FAO 2008) incorporates aspects related to the existence of fisheries in different development stages and it gives specific requirements for some of them. Paragraph 23 identifies three stages: experimental, exploratory and established, and point out that all of them should be subject to strict management and data collection programs (par 32).

Equally, (par. 44) the document establishes as a necessary step towards the identification of VMEs that 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 deep sea fisheries or where new or expanded DSFs are contemplated.

Besides, paragraph 55 of the guidelines indicates that cooperation programs on national and international observation should be established for all deep-sea fisheries, pointing out, among other things, that higher coverage levels are required, especially in experimental and exploratory stages of a fishery. Finally, it is pointed out that, regarding conservation and management instruments, a regulatory framework should include a set of rules and regulations for the management of the existing fisheries, as well as for opening new fishing grounds to exploratory fishing (par. 61) and it indicates that precautionary measures for conservation and management, including catch and fishing effort control, are fundamental during the exploratory stage of a fishery, and should be a major component in the management of established fisheries.

The text of the Convention of the South Pacific Regional Fisheries Management Organisation (SPRFMO) in Article 22 defines the following concepts and issues related to new or exploratory fisheries:

1 A fishery that has not been subject to fishing or has not been subject to fishing with a particular gear type or technique for ten years or more shall be opened as a fishery or opened to fishing with such gear type or technique only when the Commission has adopted cautious preliminary conservation and management measures in respect of that fishery, and, as appropriate, non-target and associated or dependent species, and appropriate measures to protect the marine ecosystem in which that fishery occurs from adverse impacts of fishing activities.

2 Such preliminary conservation and management measures, which may include requirements regarding notification of intention to fish, the establishment of a development plan, mitigation measures to prevent adverse impacts on marine ecosystems, use of particular fishing gear, the presence of observers, the collection of data, and the conduct of research or exploratory fishing, shall be consistent with the objective and the conservation and management principles and approaches of this Convention. The measures shall ensure that the new fishery resource is developed on a precautionary and gradual basis until sufficient information is acquired to enable the Commission to adopt appropriately detailed conservation and management measures.

3 The Commission may, from time to time, adopt standard minimum conservation and management measures that are to apply in respect of some or all new fisheries prior to the commencement of fishing for such new fisheries.

According to the above, the impact assessments for deep-sea fisheries in the case of new/exploratory fisheries must follow the FAO deep-sea management guidelines (FAO 2008) and consider the same requirements indicated in previous sections, but taking into account the limited information available at the stage of new/exploratory fishery. These requirements are listed below.

## 8.1 Description of the Proposed Fishing Activities

In instances where new or exploratory fisheries are being undertaken, assessments shall provide a quantified description of the planned fishing activities, including:

- Details of the vessels to be used, providing all vessel data required in terms of the SPRFMO Data Standards for vessel data, and confirmation that they appear on the list of authorized SPRFMO vessels submitted by flag states to the SPRFMO Secretariat.
- Detailed description of fishing methods (trawls, hook and lines, traps, gillnets, tangle nets) to be used, including a description and gear plan, providing the information needed to evaluate potential impacts, such as net or bottom line types, net dimensions or bottom line lengths / number of hooks, trawl-door type, size and weight, footrope dimensions and type, ground gear (bobbins, rock-hopper gear, etc), range in fishing height off bottom, net opening and any factors affecting gear selectivity.
- Seabed depth range to be fished.
- Target species, and likely or potential by-catch species.

- Intended period and duration of fishing.
- Effort indices: How many vessels, how many tows (cumulative effects), estimated tow durations or distance (ranges).

Given the nature of new or exploratory fisheries, estimates of the above information can be provided. Once the new or exploratory fishery has concluded, detailed quantification of the above information should be submitted to the Secretariat.

## **8.2 Mapping and Description of Proposed Fishing Areas**

Maps of the proposed fishing areas in relation to available information on VMEs and seabed bathymetry should be presented according to section 7.1.2.

## **8.3 Impacts Assessment**

The risk assessment in new or exploratory fisheries must consider the same issues indicated in section 7.1.3. In this case, given that there are no available information, it is necessary to clearly state the assumptions used in the impacts assessment and, once the information becomes available a new assessment should be made.

Related to interactions with VMEs, in instances where new or exploratory fisheries are being undertaken the assessment should include:

- What impacts are likely to result from the fishing gears to be used? All impacts should be identified, characterised and ranked. Information on known or likely species and habitats in the proposed fishing area should be used to evaluate potential impacts of the fishing gears to be used.
- What will the probability, likely extent (% of habitat targeted) and magnitude of the interaction between the proposed fishing gear / targeting practices on the VMEs in the proposed fishing areas be?
- What are the characteristics of the habitats and benthic communities which may be impacted? Are the fished seabed features likely to support VMEs?
- How diverse is the ecosystem in the proposed fishing areas, and will the fishing activity reduce this biodiversity? Do the proposed fishing areas contain rare species which do not occur elsewhere?
- What is the likely spatial scale and duration of the impacts? The overall scale of impact will be the product of spatial scale, duration and cumulative impact on VMEs and low productivity resources. To the extent possible, rates of recovery, regeneration and re-colonisation should be quantified or estimated.
- Are there any other threats or issues of concern expected from the proposed fishing activities, such as gear loss and ghost fishing, incidental bycatch discards, protected or endangered species mortalities, effects on ecosystem functioning?

#### **8.4 Information on Status of the Deepwater Stocks to be Fished**

In instances where exploratory or experimental fisheries are being undertaken the assessment should include:

- A list of the intended target and likely main by-catch species.
- Tables of historic catches and catch trends of these species in the intended fishing area, if available.
- Results of any surveys conducted on the stocks to be fished.
- Results of the most recent stock assessments that have been conducted for the stocks to be fished, if any such stock assessments have been conducted.

#### **8.5 Monitoring, Management and Mitigation Measures**

In new or exploratory fisheries precautionary conservation and management measures are essential. It must be considered all as described in Section 7.1.5, according to FAO guidelines:

65. Precautionary conservation and management measures, including catch and effort controls, are essential during the exploratory phase of a DSF, and should be a major component of the management of an established DSF. They should include measures to manage the impact of the fishery on low-productivity species, non-target species and sensitive habitat features. Implementation of a precautionary approach to sustainable exploitation of DSFs should include the following measures:
- i. precautionary effort limits, particularly where reliable assessments of sustainable exploitation rates of target and main by-catch species are not available;
  - ii. precautionary measures, including precautionary spatial catch limits where appropriate, to prevent serial depletion of low-productivity stocks;
  - iii. regular review of appropriate indices of stock status and revision downwards of the limits listed above when significant declines are detected;
  - iv. measures to prevent significant adverse impacts on vulnerable marine ecosystems; and
  - v. comprehensive monitoring of all fishing effort, capture of all species and interactions with VMEs.

Therefore, assessments for new/exploratory fisheries will include a description of the monitoring, mitigation and management measures that will be in place, as outlined above.

Considering that in the new fisheries the characteristic is the scarce information about the species and ecosystem to be intervened, the biological and oceanographic information recording and monitoring should be privileged. For that, strict application protocols on board should be designed, to allow in the middle-term at least to determine the necessary parameters for VME identification

The information collected in the first fishing sets carried out during the development of a new fishery, especially in areas where fishing has not been before, shall serve to establish the taxonomic groups present, identify those that may constitute evidence of VME and defining operational guides in the subsequent sets. Catch limits, recurrent group or taxonomic species

between fishing sets should be considered. Likewise considering the information collected criteria shall be established to take *in situ* management measures, in accordance with an *ad hoc* protocol, similar to the one indicated in Appendix A.

If the existence of evidence of VME is established a measure could be adopted to prevent possible impacts such as the move on rule. However, this measure could only be applied when the zone where the evidence has been found has already been prospected and information is available that allows the confirmation of such evidence.

Notwithstanding the foregoing, as information is recorded and the fishery and the ecosystem are better characterized, the data should be submitted to the SPRFMO Secretariat, in whose Scientific Committee the results should be analyzed and, if applicable, management measures shall be proposed when there exists enough information to determine evidence of VME or to allow the designation of VME

Details regarding the reporting of evidence of a VME to the SPRFMO Secretariat should be included.

Chile, 31 de mayo de 2010