Protocols for the protection of VMEs in the GFCM area of application

A –VME encounter reporting protocol in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004[1], 2006[2] and 2009[3] call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objective

Further implement the precautionary approach for managing deep-sea fisheries (DSF) with respect to VMEs, due to the difficulty in acquiring data on VMEs location and extent and with a view to avoiding the risk of significant adverse impacts (SAIs) by fisheries, GFCM should adopt a VME Encounter Protocol for the DSF operating in its area of application.

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) should consider, as necessary, applying additional management measures to their flagged vessels undertaking DSF to avoid overexploitation of resources and to avoid SAIs on VMEs.

3. Definitions

The list of VME Indicator Features, Habitats and Taxa for the Mediterranean Sea is given in Annex 1.

4. Scope

- *Geographical coverage:* Mediterranean Sea (GSAs 01 to 28)

- *Fisheries*

The following fisheries shall be considered:

      i.   all fishing vessels above 15 m (LOA) operating with bottom contact fishing gear fishing for *Aristaeomorpha foliacea, Aristeus antennatus,* or *Plesionika martia*

     ii.   all fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) at depths deeper than 300 m and all offshore seamounts;

For the purposes of these technical elements, the fisheries described above shall be referred to as "deep-sea fisheries" (DSFs).

5. Encounter protocol

- *Encounter:* an encounter with VME Indicator Taxa is defined as any catch of VME Indicator Taxa obtained by any DSF.

Encounter rule: following an encounter with VME Indicator Taxa during DSF, the vessel captain shall immediately report the encounter to the flag State, on the form provided in Annex 2, including the following information:

  i. the position of the vessel, either by the start and end point of the tow or set, or by another position that is closest to the exact encounter location;

  ii. the fishing characteristics of the vessel;

iii. the groups of the VME Indicator Taxa encountered and the best estimates of their live weight (kg).

6. Reporting to GFCM Secretariat

Upon notification by the vessel captain, as described above, relevant CPCs shall forward, within 30 days, the encounter information reported by the vessel captain, to the GFCM Secretariat, including by electronic means.

7. Review of the information gathered by mean of the VME Encounter Protocol

The GFCM Secretariat shall compile the data received with the encounter protocols and set up maps of the distribution of encounters with VME Indicator Taxa, including their abundance by group. The GFCM Secretariat shall regularly inform the SAC about the reported catches of VME Indicator Taxa in Mediterranean fisheries. The SAC shall review this information and, based upon the best scientific evidence available, evaluate the occurrence of VMEs and propose to the Commission, as appropriate, the establishment of new management measures, including FRAs, to ensure the protection of these ecosystems.

8. Observers

The use of scientific observers to assist the crew in data collection is encouraged in order to allow the identification of the VME Indicator Taxa to the lowest taxonomic level and to obtain information on bycatch composition.

9. CPCs responsibilities

CPCs should consider adopting temporary closures and apply these to their flagged vessels if they consider that the encounter has identified a VME. Any measure adopted in this sense should be reported to the GFCM Secretariat for further notification to the SAC.

Mediterranean VME indicator features, habitats and taxa

(a) Mediterranean VME indicator features

The following features potentially support VMEs:

Seamounts and volcanic ridges
Canyons and trenches
Steep slopes
Submarine reliefs (*slumped blocks, ridges, cobble fields, etc.*)
Cold seeps (*pockmarks, mud volcanoes, reducing sediment, anoxic pools, methanogenetic hard bottoms*)
Hydrothermal vents

(b) Mediterranean VME indicator habitats

The following habitats potentially support VMEs:

Cold-water coral reefs
Coral gardens
- Hard-bottom coral garden
- Soft-bottom coral gardens
Sea pen fields
Deep-sea sponge aggregations
- "Ostur" sponge aggregations
- Hard-bottom sponge gardens
- Glass sponge communities
- Soft-bottom sponge gardens
Tube-dwelling anemone patches
Crinoid fields
Oyster reefs and other giant bivalves
Seep and vent communities
Other dense emergent fauna

(c) Mediterranean VME indicator taxa

Phylum	Class	Subclass (Order)
Cnidaria	Anthozoa	Hexacorallia (Antipatharia, Scleractinia)
		Octocorallia (Alcyonacea, Pennatulacea)
		Ceriantharia
	Hydrozoa	Hydroidolina
Porifera (sponges)	Demospongiae	
	Hexactinellida	Amphidiscophora
		Hexasterophora
Bryozoa	Gymnolaemata	
	Stenolaemata	
Echinodermata	Crinoidea	Articulata
Mollusca	Bivalvia	Gryphaeidae (*Neopycnodonte cochlear, N. zibrowii*)
		Heterodonta* (Lucinoida) (e.g. *Lucinoma kazani*)
		Pteriomorphia* (Mytiloida) (e.g. *Idas modiolaeformis*)
Annelida*	Polychaeta	Sedentaria (Canalipalpata) (e.g. *Lamellibrachia anaximandri, Siboglinum* spp.)
Arthropoda*	Malacostraca	Eumalacostraca (Amphipoda) (e.g. *Haploops* spp.)

*only chemosynthetic species that indicate the presence of a cold seep or hydrothermal vent are considered

VME encounter reporting in the GFCM area of application

Separate forms to be completed for each deployment of the fishing gear (haul/set) in which VME Indicator Taxa are caught.

A. Fishing Trip Information	
Country:	
Vessel name:	
Captain (name and last name):	
Date of encounter (dd/mm/yyyy):	
B. Fleet and gear information[4]	
Fleet segment:	
Fishing gear:	
C. VME Encounter coordinates	
GSA:	**Statistical grid:**
Point 1 (Start)	**Point 2 (End)**
Latitude:	Longitude:
Latitude:	Longitude:
Fishing depth (average or range, m):	
VME Feature and/or Habitat (Annex 1 a and b)	
D. VME Indicator Taxa catch information (Annex 1 c)	
Total live weight of **corals** in the haul/set (kg):	
Total live weight of **sponges** in the haul/set (kg):	
Total live weight of **other vulnerable benthic taxa** in the haul/set (kg):	
E. VME Indicator Taxa (by trained observers on board)	
Identify VME Taxa to lowest taxonomic level (species if possible) and provide comments.	
F. Pictures of VME Indicator Taxa (by fishers and/or observers on board)	
Take pictures of the different VME Indicator Taxa and submit them as an attachment to the current form.	

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[4] Refer to: GFCM, 2016. GFCM Data Collection Reference Framework (DCRF) (http://www.fao.org/gfcm/data/dcrf/en/)

B - Mapping existing deep-sea fishing areas in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004[5], 2006[6] and 2009[7] call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objectives

The deep-sea bottom fisheries of the Mediterranean target only a few species that are fished on specific habitats. In order to manage these fisheries sustainably, and prohibit any significant adverse impacts they may cause on non-target species and VMEs, it is necessary to map the distribution of the existing deep-sea bottom fishing areas.

3. Definitions

"Existing deep-sea bottom fishing areas", means that portion of the GFCM area of application where deep-sea bottom fishing has occurred according to the map adopted under Section B Paragraph 5..

"Exploratory (or new) deep-sea bottom fishing" occurs during the initial development phase of a DSF when the DSF operates in areas that have not been previously fished or in fished areas following significant changes in the gear or effort, as described in paragraphs 23, 55, 61 and 65 of the *FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas*.

4. Scope

- *Geographical coverage:* Mediterranean Sea (GSAs 01 to 28)

- *Fisheries*

The following fisheries shall be considered:

    i. bottom trawlers above 15 m (LOA) fishing for *Aristaeomorpha foliacea, Aristeus antennatus,* or *Plesionika martia;*

    ii. all fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) at depths deeper than 300 m and all offshore seamounts;

For the purposes of these technical elements, the fisheries described above shall be referred to as "deep-sea fisheries" (DSFs).

5. Management measure

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) with vessels involved in "deep-sea bottom fisheries" shall submit to the extent possible and no later than 31 December 20[20] comprehensive maps of existing deep-sea bottom fishing areas [during the five-year period of 2012-2016] to the GFCM Secretariat. Maps shall be based on VMS/AIS data and/or other available geo-reference data and be expressed in as precise spatial and temporal resolution as possible. The submission of the detailed gear deployment position information will facilitate the mapping process. Priorities should be given to bottom trawling below 300 m, but it is highly desirable to map other types of fishing gears that contact the seafloor during normal use, e.g. bottom set longlines, gillnets, trammel nets, and pots. Contracting Parties may, in the future, consider the possibility of refining these maps on the basis of haul-by-haul information, if available. GFCM Secretariat shall compile a composite map, preferably by gear type, of the existing deep-sea bottom fishing areas within the GFCM area of application. The SAC shall review this information and based upon the scientific evidence available, adopt the map defining the existing bottom fishing areas in the GFCM area of application. The map shall be revised regularly to incorporate any new relevant information.

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[5] A/RES/59/25
[6] A/RES/61/105
[7] A/RES/64/72

C - Exploratory deep-sea bottom fishing reporting protocol in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004[8], 2006[9] and 2009[10] call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objectives

To ensure that exploratory or new deep-sea fishing activities are only allowed to expand at a rate consistent with the knowledge and management of that fishery. This will avoid overexploitation of targeted deep-sea fish stocks. Further, great care needs to be taken to ensure that VMEs are mapped and known, and suitable mitigation measures applied to ensure their protection from significant adverse impacts resulting from any new fishery.

3. Definitions

"Existing deep-sea bottom fishing areas", means that portion of the GFCM area of application where deep-sea bottom fishing has occurred according to the map adopted under Section B Paragraph 5.

"Exploratory (or new) deep-sea bottom fishing" occurs during the initial development phase of a DSF when the DSF operates in areas that have not been previously fished or in fished areas following significant changes in the gear or effort, as described in paragraphs 23, 55, 61 and 65 of the *FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas*.

4. Scope

- *Geographical coverage:* Mediterranean Sea (GSAs 01 to 28)

- *Fisheries:* All fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) are considered undertaking Exploratory (or new) deep-sea bottom fishing when operating:

  i. On VME Indicator Features (see Annex 1 a)
  ii. Outside of the existing bottom deep-sea fishing areas
  iii. Inside of existing bottom fishing areas with bottom-contact fishing gears not previously used or when significant increases of effort are planned or when a new fishery is developing

5. Management measure

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) of flagged fishing vessels undertaking exploratory (or new) deep-sea bottom fishing shall be required to complete the Exploratory deep-sea bottom fishing protocol provided in Annex 1, including the following information:

  i. the start and end point of each tow or set;

  ii. the fishing characteristics of the vessel including the gear used;

  iii. the GSA area and the Statistical Grid where the exploratory deep-sea fishing occurred;

  iv. the catch, the bycatch, the discards, and fishing effort;

  v. VME Indicator Taxa (if any) through the VME Encounter Protocol.

6. Reporting to GFCM Secretariat

Upon notification by the vessel captain, as described above, relevant CPCs shall forward, within

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[8] A/RES/59/25
[9] A/RES/61/105
[10] A/RES/64/72

30 days, the exploratory deep-sea bottom protocol form reported by the vessel captain, to the GFCM Secretariat, including by electronic means.

7. Review of the information gathered through the exploratory deep-sea bottom protocol

The GFCM Secretariat shall compile the data received with the exploratory deep-sea bottom protocol and shall regularly inform the SAC. The SAC shall review this information.

8. Observers

The use of scientific observers to assist in data collection and reporting is highly desirable according to the GFCM DCRF[11].

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[11]Refer to: GFCM, 2018. GFCM Data Collection Reference Framework (DCRF) (http://www.fao.org/gfcm/data/dcrf/en/).

Exploratory deep-sea fishing reporting in the GFCM area of application (Mediterranean Sea)

Separate forms must be completed for each new exploratory deep-sea fishing trip

A. Fishing Trip Information
Country:
Vessel name:
Captain (name and last name):
Dates of exploratory fishing trip (dd/mm/yyyy format):

B. Fleet and gear information[12]
Fleet segment:
Fishing gear:

Area information	
GSA:	**Statistical grid[13]:**
Area fished (coordinates-attach map):	
VME Indicator Feature (if any):	
Depth range fished (m):	
Fishing effort:	

C. Catch summary
List main commercial species and quantities caught during the exploratory deep-sea bottom fishing

D. Bycatch summary
Provide details of bycatch species

D. VME Indicator Taxa
Use the provided VME Encounter Protocol for any catch of VME Indicator Taxa

E. Comments (by fishing crew)

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[12] Refer to: GFCM, 2018. GFCM Data Collection Reference Framework (DCRF) (http://www.fao.org/gfcm/data/dcrf/en)

[13] Refer to: Appendix M - Geographic statistical grid for red coral, DCRF. GFCM, 2018. GFCM Data Collection Reference Framework (DCRF)