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**PROPOSAL FOR A GFCM DATA COLLECTION REFERENCE  
FRAMEWORK (DCRF)**

## **PREPARATION OF THIS DOCUMENT**

This document has been prepared by the GFCM Secretariat. The work has been carried out under the general supervision of Mr Abdellah Srour, GFCM Executive Secretary, and led by Mr Paolo Carpentieri, consultant for data collection, with the technical support of GFCM staff (Mr Miguel Bernal, fisheries resources officer, Ms Pilar Hernandez, information management officer, Mr Federico De Rossi, data compliance officer) in collaboration with Ms Evelina Sabatella, expert on socio-economic issues, and thanks to the contribution of the national focal points appointed for the data collection task.

This document encompasses the technical inputs gathered at the 2014 sessions of the Subcommittees of the GFCM Scientific Advisory Committee (SAC) (3–5 February 2014, Montenegro). The DCRF proposal is composed of two chapters with ten Appendixes which form an integral part of this proposal.

A methodological document including a detailed description of the data within the proposed DCRF and its components (tasks) will be released at a later stage.

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## INTRODUCTION

As a concrete response to the need to strengthen the GFCM framework for the collection and processing of data on fisheries, this document proposes a new Data Collection Reference Framework (DCRF) in the GFCM area.

The DCRF aims at being instrumental to achieve a more efficient data collection programme at the subregional level and a better integration between data collection and subregional multiannual management plans. It encompasses all the necessary indications for the collection of fisheries data by GFCM Members in a standardized way in order to provide the GFCM with an exhaustive set of data supporting fisheries management decision-making processes both at the regional and subregional level. Starting from the data and information requirements included in current GFCM decisions, the framework considers the inputs of GFCM Members as well as the suggestions of national experts aimed at overcoming difficulties in collecting/transmitting data to GFCM thus simplifying and clarifying the data needs.

This proposal is the result of a series of actions carried out within work package 2 on data collection of the GFCM Framework Programme (FWP) - a tool aimed at developing comprehensive and coherent activities to fulfil the objectives of the GFCM within the process of its modernization.

The DCRF provides an important scientific information basis to support the GFCM in its decision-making process.

## Objectives of the GFCM

*“The purpose of the Commission shall be to promote the development, conservation, rational management and best utilization of living marine resources, as well as the sustainable development of aquaculture in the region.”*

According to GFCM basic texts of (Article III Agreement for the establishment of the General Fisheries Commission for the Mediterranean, 29 April 2004), the main objectives of the Commission are:

- a) to keep under review the state of living marine resources, including their abundance and the level of their exploitation, as well as the state of the fisheries based thereon;
- b) to formulate and recommend, in accordance with the provisions of Article V (GFCM, 2004), appropriate measures:
  - (i) for the conservation and rational management of living marine resources, including measures:
    - regulating fishing methods and fishing gear,
    - prescribing the minimum size for individuals of specified species,
    - establishing open and closed fishing seasons and areas, and
    - regulating the amount of total catch and fishing effort and their allocation among Members;
  - (ii) for the implementation of these recommendations;
- c) to keep under review the economic and social aspects of the fishing industry and recommend any measures aimed at its development;
- d) to encourage, recommend, coordinate and, as appropriate, undertake training and extension activities in all aspects of fisheries;
- e) to encourage, recommend, coordinate and, as appropriate, undertake research and development activities, including cooperative projects in the areas of fisheries and the protection of living marine resources;

- f) to assemble, publish or disseminate information regarding exploitable living marine resources and fisheries based on these resources;
- g) to promote programmes for marine and brackish water aquaculture and coastal fisheries enhancement;
- h) to carry out such other activities as may be necessary for the Commission to achieve its purpose as defined above.

To fulfil these objectives, it is of paramount importance to gather reliable and representative data on the different aspects of fisheries. The GFCM Secretariat is therefore creating appropriate tools to facilitate the systematic transmission of these data by Members in the most possible standardized way, so that they can be stored, managed and made available for analysis to the different scientific bodies.

## **Historical background (performance review, framework programme and data collection activities)**

### ***Performance review and modernization of the GFCM***

The GFCM performance review was carried out from 2009 to 2010 by an independent panel consisting of experts in fisheries and aquaculture. This exercise stemmed down from the calls of the United Nations General Assembly and the FAO Committee of Fisheries<sup>1</sup> that all Regional Fisheries Management Organizations (RFMOs) review and modernize their mandates in accordance with a common methodology and a common set of criteria.

Echoing these calls, the GFCM agreed at its thirty-second session (2008)<sup>2</sup> to undertake such a review and endorsed in 2009 a set of guidelines and criteria to conduct this exercise<sup>3</sup>. An approach was suggested to assess the GFCM Agreement and the extent to which measures adopted by the GFCM had achieved the objectives of the Commission.

As a result of the GFCM performance review, a number of recommendations were formulated in relation to the following core topics:

- modernization of the GFCM Agreement and relevant rules of procedure;
- strengthening of the subsidiary bodies objectives and mandates;
- enhancement of compliance and enforcement mechanisms;
- updating of decision-making and dispute settlement procedures;
- promotion and strengthening of international cooperation;
- review of some financial and administrative issues.

These findings and conclusions were presented to the thirty-fifth session of the Commission, in 2011. Following the discussions held, the Commission agreed to build upon the strengths and make up for the weaknesses identified by the GFCM performance review and to establishing a Task Force for this

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<sup>1</sup> COFI Report on Strengthening regional fisheries management organizations and their performances including the outcome of the 2007 tuna RFMOs meeting, 27<sup>th</sup> Session (Rome, 5–9 March 2007), available at: <ftp://ftp.fao.org/docrep/fao/meeting/011/j8995e.pdf>.

<sup>2</sup> See GFCM Report of the thirty-second session (Rome, 25–29 February 2008), p.10, available at: <ftp://ftp.fao.org/docrep/fao/010/i0162e/i0162e00.pdf>.

<sup>3</sup> See GFCM Report of the thirty-third Session (Tunis, 23–27 March 2009) , p. 118, available at: <http://151.1.154.86/GfcmWebSite/docs/Reports/GFCM33e.pdf>.

purpose. This Task Force for the Modernization of the Legal and Institutional framework therefore proposed to address a number of specific issues on subjects such as fisheries conservation and management, aquaculture, compliance and enforcement, financial and administrative aspects, decision-making, dispute settlement, international cooperation and interactions with non-Members.

### ***Framework programme (FWP)***

In order to make progress on issues under the consideration by the Task Force, a Framework Programme (FWP) has been developed to help GFCM adopt a more functional approach in view of the amendment of the GFCM Agreement. The preliminary phase of the FWP was launched in July 2012 following a first validation meeting of the Task Force, which recommended establishing a platform promoting sustainable development and cooperation in the Mediterranean and the Black Sea through multiannual and multidonor arrangements.

The FWP is also an instrument that should help strengthening intrainstitutional coordination with the FAO regional projects and other intergovernmental organizations in matters relating to marine capture fisheries and aquaculture at the regional level. To this end, five work programmes (WP) have been defined within the FWP: Governance (WP01), Data collection (WP02), Aquaculture (WP03), Small-Scale Fisheries (WP04), Sub-regional Cooperation and Technical Assistance (WP05).

### ***Data collection activities***

The main outcomes of WP02 (data collection) should be a more efficient data collection programme at the subregional level and a better integration between data collection and the implementation of subregional multiannual management plans.

To achieve these objectives, a series of coordinated actions to strengthen the GFCM framework for the collection and processing of data on fisheries have been carried out. In particular, an assessment of data compliance, databases and data transmission protocols (*internal assessment*) as well as of national data collection systems –including compliance, collection process, processing, submission process and quality assessment (*external assessment*) – has been performed.

The internal assessment has been carried out through a critical evaluation of current fisheries databases and transmission protocols at the GFCM Secretariat, taking into consideration, in particular, the overall context of Task 1 data submission framework (Rec. GFCM/33/2009/3). Under this internal assessment the following aspects have been examined:

- adequacy of current databases;
- data submission protocols provided by the Secretariat;
- GFCM Members' compliance with all GFCM data requirements;
- identification of possible reasons for non-compliance;
- possible modification or improvement of the GFCM requirements.

The external assessment, performed in collaboration with the national focal points<sup>4</sup> through the use of online questionnaire, enabled to assess the different national data programmes and identify possible gaps and ways of improvement. This approach aimed at collecting information on the status of implementation of data collection programmes in the Mediterranean and Black Sea countries and at providing the basis for the development of a future regional cooperation programme on fisheries.

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<sup>4</sup> Appointed by national authorities of each GFCM member

In order to analyze the results of both assessments (internal and external), and to receive direct feedback from the countries, three workshops were held in 2013:

- Workshop on fisheries data collection and management plans in the Adriatic Sea, Split (Croatia) from 18 to 19 March 2013<sup>5</sup>
- Subregional meeting on data collection for western, central and eastern Mediterranean, Frascati (Italy) from 25 to 27 March 2013<sup>6</sup>
- Workshop on fisheries data collection in the Black Sea, Varna (Bulgaria) from 22 to 23 April 2013<sup>7</sup>.

The main gaps, difficulties, proposals and recommendations that emerged during these workshops have been used as a basis to propose possible modifications and/or improvements to GFCM data and information requirements. The most significant outputs are summarized below:

#### GAPS

- The contents of the current databases managed by the Secretariat are not enough to fulfill GFCM objectives;
- Although some countries have data collection programmes in place, most of the requested information is not provided to the GFCM.

#### DIFFICULTIES

- In some countries there are financial and human resources constraints, including basic education level of fishermen;
- The aggregation level of some variables in Task 1, in particular in Task 1.3, Task 1.4 and Task 1.5 is very complex;
- The description/meaning of some variables is not clear;
- The number of variables is quite extensive.

#### PROPOSALS

- Overall, the number of variables should be reduced;
- An agreed glossary for all variables requested should come along with the submission tools.
- The timing for the submission of data to GFCM should be revised;
- The Secretariat should send to the countries on a regular basis and prior to the deadlines reminders about data and information requirements;
- The Secretariat should send summary reports about the status of submitted data once it has received and processed the data sets;
- The data transmission tools should be improved in terms of usability, including the releasing of bilingual version (English and French) when possible;
- National focal points should be maintained in the countries in the long term in order to improve the communication flow with the Secretariat.

#### SPECIFIC PROPOSALS FOR TASK 1

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<sup>5</sup> [http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM\\_XXXVII\\_2013\\_Inf.12.pdf](http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM_XXXVII_2013_Inf.12.pdf)

<sup>6</sup> [http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM\\_XXXVII\\_2013\\_Inf.11.pdf](http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM_XXXVII_2013_Inf.11.pdf)

<sup>7</sup> [http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM\\_XXXVII\\_2013\\_Inf.10.pdf](http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM_XXXVII_2013_Inf.10.pdf)

- Aggregation levels should be revised to make the reporting of basic data such as catch and effort easier;
- Task 1 could be divided in different modules that should be submitted on a staggered basis;
- A minimum set of mandatory information/variables should be identified;
- The final purpose of biological data currently included in Task 1.5 should be revised and better defined. Particular attention should be paid to the information that is really useful for stock assessment;
- Species for which data are required should be prioritized at the regional level on the basis of criteria such as the importance in terms of catch, economic and/or ecological value.

Building upon these elements and on the basis of the outcomes emerged from GFCM events, including the sessions of the Scientific Advisory Committee (SAC) and its subcommittees, the GFCM Data Collection Reference Framework (DCRF) was developed to allow for a compatible data collection programme in the GFCM area and its subregions. This exercise was carried out in light of the GFCM binding decisions in force and taking into consideration other GFCM data source such as the SAC national reports<sup>8</sup>, the stock assessment forms<sup>9</sup> and ad hoc questionnaires. .

This document is the first concrete DCRF proposal developed by the GFCM Secretariat to help overcoming weaknesses and consolidating the strengths of the current GFCM data collection scheme.

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<sup>8</sup> <http://www.gfc.org/gfc/topic/16165/en>

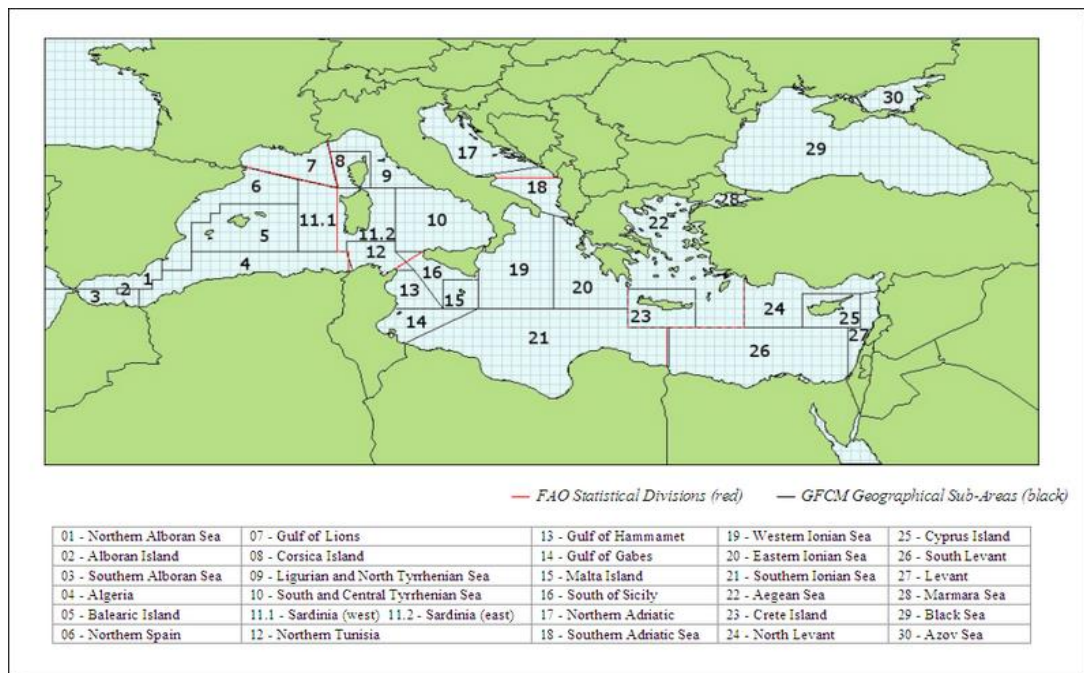
<sup>9</sup> <http://www.gfc.org/gfc/topic/16086/en>



## Chapter 1

### The need for a Data Collection Reference Framework (DCRF)

The GFCM has the responsibility and authority to oversee the full process of fisheries management, undertake scientific evaluations and take decisions to ensure the best utilization of fisheries resources in its area of competence (Figure 1). The collection of data required to achieve an appropriate management of fisheries is crucial and Members should therefore provide their best available information in terms of quality and comprehensiveness.



**Figure 1:** Map of the GFCM Geographical subareas (GSAs) (Res. GFCM/33/2009/2)

The need to establish functional data collection systems in the GFCM area has always been one of the main issues discussed within the GFCM. Many efforts have been made to develop useful tools for the creation of GFCM information systems, associated databases and protocols for data submission (e.g. Task 1 – Rec. GFCM/33/2009/3). However, notwithstanding the steps taken since 2010 to encourage and support GFCM Members to submit data, the level of compliance still needs to be enhanced and many datasets have been received in an incomplete state, thus hindering the capacity of the GFCM to use these data to fulfil its mandate.

The rationale behind the design of this framework is to reduce data requirements and encompass them into a single, simple and easy-to-understand document, providing Members with the necessary indications for the collection and transmission of data related to fisheries to the GFCM Secretariat. Moreover, the information gathered should be sufficient and reliable enough for scientists to review the status of the different resources, to assess the economic and social dimensions of the fleets and to provide scientific advice on the status of the resources, as well as for Members to prepare recommendations to manage those resources. .

In order to fulfil the GFCM objectives, the data collected within the DCRF, should include area-based information on national fleets and their activities, catch and effort, biological information on main species, including discards and by-catch. Socio-economic data are also needed in order to assess the economic situation of fishing enterprises and employment trends. Within the DCRF, GFCM Members

should guarantee the quality and completeness of the data at the requested disaggregation level so that they can be timely submitted, according to an agreed format, to the GFCM Secretariat.

The DCRF should incorporate the following information:

- vessel identification (e.g. flag, port of registry and registration number);
- vessel specifications (e.g. registered length, gross tonnage, power of main engines, date built, material of construction);
- fishing gear description (e.g., types, gear specifications and quantity);
- fleet segment;
- total landing data;
- total catch (landing and discards) per species and gear;
- effort by fleet segment and species;
- socio-economic data;
- biological information to adequately perform stock assessments, such as information on growth, recruitment, distribution and stock identity;
- other relevant data, including research surveys (i.e. hydro-acoustic surveys, oceanographic and ecological studies) and any other research on environmental factors affecting stock abundance.

In particular, the proposed DCRF (see chapter II) is based on six different tasks, as indicated below.

**Table 1 – Summary of Tasks and main sources**

GFCM-DCRF TASKS (T)			SOURCES <sup>10</sup>	
ID	TASK	SUBTASKS	GFCM DECISIONS	OTHER
T. I	CATCH	A) Landing data	Yes	(SAC national reports)
		B) Catch data per species	Yes	(Statlant 37A)
T. II	BY-CATCH OF VULNERABLE SPECIES	-	Yes	(Bibliographical reviews, research projects, ad hoc questionnaires)
T. III	FLEET	-	Yes	(SAC national reports, ad hoc questionnaires)
T. IV	EFFORT	-	Yes	-
T. V	SOCIO-ECONOMICS	-	Yes	(ad hoc questionnaires)
T. VI	BIOLOGICAL INFORMATION	A) Stock assessment	Yes	(Stock assessment forms)
		B) Length data	Yes	-
		C) Other biological data	No	-
		D) Dolphin fish	Yes	-
		E) Red coral	Yes	(ad hoc questionnaires)

<sup>10</sup> Data and information sources

## Chapter 2

### Tasks of the Data Collection Reference Framework

This chapter describes basic fisheries data needed for an effective conservation and management of marine living resource in the Mediterranean and Black Sea area, subdivided according to the six tasks identified within the DCRF. Each task is briefly introduced with a short description and information on the countries concerned the type of obligation (mandatory and/or optional data), the requested variables as well as the frequency of data submission and the deadline for the submission:

<b>Task</b>
- Description
- Countries involved
- Data (mandatory, optional)
- Confidentiality
- Frequency and deadline of transmission

A complementary technical document providing the definition of the variables/data requested and indications for their estimation will be elaborated as a companion of the DCRF.

To gather all the necessary information, formal data calls will be launched every year by the GFCM Secretariat for each DCRF task. Full details on parameters, aggregation levels and transmission instructions will be indicated in the data calls. Members should proceed to the timely transmission of their data through the national focal points for data collection using a dedicated electronic format provided by the Secretariat. The data sets gathered by the Secretariat will then be checked for compliance and quality before their final upload in the information systems. Data will be made available to experts participating to the GFCM scientific subsidiary bodies (e.g. working groups, subcommittee and SAC), according to ruling data confidentiality policies and procedures. The GFCM Secretariat will send to each national focal point a short report about the status of the transmitted data (i.e. completeness and accuracy) and liaise with them in case corrections are needed.

In developing information systems to collect, validate, analyse and disseminate data, the GFCM Secretariat will pay particular attention to international codifications and standards (e.g.: fishing gear, species, fishing areas, etc.) as well as to all aspects related to data security and confidentiality (Resolution GFCM/35/2011/2).

In the long run, the DCRF will help countries collect the minimum sets of information required to assess the status of their fisheries and the status of the main stocks. In this regard, a classification of priority species have been done by taking into account different criteria such as abundance, economic value and conservation status (Annex A). The data collected through the DCRF will provide the GFCM with the necessary information to manage Mediterranean and Black Sea fisheries in order to ensure the sustainability of the marine living resources both at the regional and subregional level.

The data requirements of the DCRF, together with its main purposes and the relation to current data requirements described in existing GFCM decisions, is detailed in Table 2.

Data can be transmitted separately for each DCRF task according to the data submission calendar (Appendix H).

Table 2 - GFCM DCRF tasks

DCRF TASKS (T)			DATA	PURPOSES	CURRENT DATA REQUIREMENTS
ID	TASK	SUB-TASK			
T. I	CATCH	I.1) Landing data	Annual data on total national captures (i.e. landing) by country, area and fleet segment.	Monitoring of total annual biomass landed by fleet segment, country and area.	<ul style="list-style-type: none"> <li>- Rec. GFCM/33/2009/3</li> <li>- Rec. GFCM/33/2009/7</li> <li>- Rec. GFCM/35/2011/2</li> <li>- Rec. GFCM/36/2012/1</li> </ul>
		I.2) Catch data per species	Annual data on total catch (i.e. landing and discards) for the main commercial species reported by country, area and fleet segment.	Monitoring the trend of total catches (landing and discards) of the main commercial species	<ul style="list-style-type: none"> <li>- Rec. GFCM/33/2009/3</li> </ul>
T. II	BY-CATCH OF VULNERABLE SPECIES	-	Annual data (i.e. number of specimens) on incidental catches of vulnerable species (i.e. seabirds, turtles, marine mammals and sharks species) by area, country and fishing gear.	Quantify incidental catches of vulnerable species and on the impact of fisheries on species of conservation concern.	<ul style="list-style-type: none"> <li>- Rec. GFCM/35/2011/5</li> <li>- Rec. GFCM/36/2012/3</li> <li>- Rec. GFCM/35/2011/4</li> <li>- Rec. GFCM/36/2012/2</li> </ul>
T. III	FLEET	-	Register of fishing vessels with identification features (i.e. vessel name, registration number, port, fishing gears, geographical sub area, etc.) and information on technical features (i.e. gross tonnage, kilowatt, length overall etc.) of fleets operating in the GFCM area.	Monitoring of fishing capacity in the GFCM area	<ul style="list-style-type: none"> <li>- Res. GFCM/35/2011/1</li> <li>- Rec. GFCM/33/2009/5</li> <li>- Rec. GFCM/33/2009/6</li> <li>- Rec. GFCM/33/2009/2</li> <li>- Rec. GFCM/33/2009/1</li> <li>- Rec. GFCM/33/2009/3</li> <li>- Rec. GFCM/30/2006/3</li> </ul>
T. IV	EFFORT	-	Fishing effort data calculated as a combination of capacity and activity by country, area, fleet segment and fishing gear. Information on catch per unit effort (CPUE) for the main commercial species.	To account for the amount of effort deployed and to evaluate fishing pressure and trends in CPUE.	<ul style="list-style-type: none"> <li>- Rec. GFCM/33/2009/3</li> </ul>
T. V	SOCIO-ECONOMICS	-	Data related to economic and social variables of the fleets by country, area and fleet segment.	Assess the economic value and social implications of the fisheries.	<ul style="list-style-type: none"> <li>- Rec. GFCM/33/2009/3</li> </ul>

DCRF TASKS (T)			DATA	PURPOSES	CURRENT DATA REQUIREMENTS
ID	TASK	SUB-TASK			
T. VI	BIOLOGICAL INFORMATION	<b>VI.1) Stock assessment</b>	Annual data on stock identification and stock biological information on priority species: growth parameters, length/weight relationships, recruitment, biomass. Information on environmental factors that may affect the population dynamics.	Assess the status of stocks and provision of scientific advice.	– Rec. GFCM/33/2009/3
		<b>VI.2) Length data</b>	Data related to the observed size distribution of the catch (landing and discards), by identified priority species per area and fleet segment.	Monitoring the structure of populations	– Rec. GFCM/33/2009/3
		<b>VI.3) Other biological data</b>	Biological variables (i.e. sex, maturity and age) of the catch (landing and discards), by identified priority species per area and fleet segment	Monitoring the biological rates and the dynamics of the exploited species.	– Rec. GFCM/33/2009/3
		<b>VI.4) Dolphin fish</b>	Annual data on the total landing, the fishing period and the area of fishing operations regarding the dolphin fish <i>Coryphaena hyppurus</i> .	Monitor the population status of the dolphin fish.	– Rec. GFCM/30/2006/2
		<b>VI.5) Red Coral</b>	Information on red coral colonies: management, harvest, effort and biological parameters.	Manage and regulate the exploitation of red coral.	– Rec. GFCM/35/2011/2 – Rec. GFCM/36/2012/1

For the purpose of this framework the following definitions have been used:

- FLEET SEGMENT:** combination of a group of vessels (Appendix B) using the same gear for more than 50% of the time at sea during a year. In order to define the fleet segments the GFCM classification already in force has been slightly modified to accommodate the most recent developments.
- FISHING GEAR:** equipment used for fishing (e.g. gillnet, harpoon, and haul seine, longline, mid-water trawl, purse seine, rod-and-reel, trap, and trawler), according to the international standard classification (FAO Ref. 29/7/1980) (Appendix D).
- TOTAL CATCH:** amount of marine biological resource taken by the fishing gear which reaches the deck of the fishing vessel. It includes catches of specimens of the target species, which are usually kept on board and retained, and bycatch, which refers to the incidental catches of species that are not targeted by the fishery with or without commercial value.
- LANDING:** part of the catch retained on board and brought ashore.
- DISCARDS:** part of the catch not retained on board and thrown away at sea (for one reason or another). It includes the catches of target species or any other species (commercial and not commercial) that are discarded at sea.

The same species can move from one category (i.e. landing or discards) to another according to the size, market demand, season or other criteria. Similarly, other species may be undesirable or of limited value in one subregion but not in another one.

## 2.1 Task I: Catch

### *Subtask I.1 – Landing data*

**Description** – The knowledge on the biomass removed from the ecosystem by fishing operations is fundamental to monitor the status of stocks as well as the impact of fishing on fish populations. This subtask refers to the total amount of captures (i.e. landing). The total amount of landing, in weight by fleet segment, together with the number of vessel, should be reported by country and area. Total landings can be obtained from different sources (e.g. logbooks, sales notes, sampling and interviews).

**Countries involved** – This task is addressed to all GFCM Members.

**Data (Mandatory)** – Landing data (in tonnes) and number of vessels (Table I.1.1), are requested by fishing area (GSA) and fleet segment (Appendix B).

**Table I.1.1 - Landing data**  
Mandatory data

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Number of vessels
Total landing (tonnes)

**Frequency and deadline of transmission** – Countries should submit the data pertaining to year n-1, by 30 June of each calendar year (n). Landing data (Table I.1) are mandatory (Appendix H).

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Table I.1.1, once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission.

### *Subtask I.2 – Catch data per species*

**Description** – For all commercial species, identified at national level, countries should submit information on total catch by area (GSA) and fleet segment. Total catch should be considered as the weight estimate of the total nominal yearly catches including retained catch (landing) and catch discarded (discards). Discards could be compulsory only for some selected fleet segments (e.g. trawlers) for which the discard rate is assessed as significant and it could be sampled adequately every year. For other fleet segments, the discard level could be assessed as insignificant, and in this case there is no need to collect information on discards. Discard estimates can also sometimes be obtained from fishers, but on-board observers during fishing trips are most valuable for the estimate of discards with additional information on vessel operations including fishing location.

**Countries involved** - This task is addressed to all GFCM Members.

**Data (Mandatory)** - Countries should submit total catch data (in tonnes), including landing and discards (if present and recorded), by all commercial species, fleet segment (Appendix B) and area (GSA) (Table I.2.1).

**Table I.2.1 - Catch data per species**  
Mandatory

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Species
Total landing per species (tonnes)
Total discards per species (tonnes)
Total catch per species (tonnes)

**Frequency and deadline of transmission** – Countries should submit data pertaining to year n-1, by 30 June of each calendar year (n). Countries are encouraged to respect this deadline and provide all requested data (Appendix H). Catch data per species (Table I.2.1) are mandatory.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Table I.2, once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission.

## 2.2 Task II: By-catch of vulnerable species

**Description** – This section refers to the specific reporting of incidental catch of seabirds, sea turtles, Mediterranean monk seal and cetaceans, as identified in recommendations GFCM/35/2011/3, GFCM/35/2011/4, GFCM/35/2011/5 and GFCM/36/2012/3. According to Recommendation GFCM/36/2012/2, any incidental taking of sharks and rays of species included in Appendix II and III (List of Endangered or Threatened Species; list of species whose exploitation is regulated) of the Barcelona Convention (Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean) should also be reported. The available information to identify fisheries with incidental catches of vulnerable species is currently still limited and it is therefore important to collect existing data and identify additional/alternative sources of information to guide any possible revision of the monitoring schemes.

**Countries involved** – This task is addressed to all GFCM Members.

**Data (Mandatory)** – Only for the species mentioned in the Appendix E (Vulnerable species), a minimum set of parameters, such as the number of specimens per fishing gear (Appendix D), should be reported. Countries should report this information in case of by-catch of vulnerable species (i.e. seabirds, sea turtles, cetaceans, monk seal and sharks) as specified in Table II.1. Data should be aggregated by species group/family if detailed information by species is not available (e.g. when specimens could not be identified at species or genus level).



**Table II.1 - Vulnerable species**  
Mandatory data for species listed in Appendix E

<b>FIELDS</b>
Country
Reference year
GSA
Group of the vulnerable species
Family
Species
Fleet segment
Fishing Gear
Number of individuals

**Frequency and deadline of transmission** – Countries should submit data pertaining to the previous year (year n-1) by 31 July of each calendar year (n) (Appendix H).

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Table II.1, once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission.

### 2.3 Task III: Fleet

**Description** - The overall objective of this task is to provide information on the fleet operating in the GFCM area of competence in order to compile reliable statistics on fishing capacity for management purposes at the regional and subregional level.

Countries should submit information about all national vessels, boats, ships, or other crafts that are equipped and used for commercial fishing purposes in the GFCM area of competence. Particular attention should be paid to small-scale vessels.

Data collected under this task will allow obtaining:

- an accurate source of statistics for the Mediterranean and Black Sea fishing fleet;
- a complete picture of the regional, subregional, and national fishing capacity;
- a better knowledge at the regional/subregional level of the age of the fleets (safety indicator);
- a picture of the historical events: entry into and exit from the fleet, modifications and characteristics.

**Countries involved** – This task is addressed to all GFCM members.

**Data (mandatory)** – The data within this task can be grouped in the following categories:

- Administrative (name, port, registration number, etc.).
- Technical (length, tonnage, power, fishing gear etc.).
- Personal (operator, crew etc.).

The list of mandatory fields is summarized in Table III.1 Additional information should be reported only for vessel over 15 meters (Table III.2).

**Table III.1 - Fleet** (all vessels)  
Mandatory data

<b>FIELDS</b>
Country
Reference year
Registration authority
Vessel name (if any)
Vessel register number
Registration number
Operational status (active indicator)
Port of registration
GSA (Main geographical fishing area)
Secondary fishing statistical area (GSA)
Tertiary fishing statistical area (GSA)
Year of entry into fishing activity
Authorisation to fish (license indicator)
Main fishing gear used
Secondary fishing gear (if any)
Third fishing gear (if any)
Length overall (LOA)
Gross tonnage (GT)
Power of the main engine (kW)
Construction year of vessel
VMS indicator (presence/absence)

**Table III.2 - Fleet** (only for vessel over 15 meters in length overall)  
Mandatory data

<b>FIELDS</b>
Country
Reference year
Date
Registration authority
Vessel name (if any)
Vessel register number
Owner (details)
Operator (if different from owner)
Min number of the crew
Max number of the crew

Moreover, countries whose vessels carry out fishing activities in fisheries restricted areas (FRA - Appendix C; Recommendations GFCM/30/2006/3 and GFCM/33/2009/1) should properly report ad hoc information (Table III.3).

**Table III.3 - Fisheries Restricted Areas (FRA)**  
Mandatory data

<b>FIELDS</b>
Country
Reference year
Date
Registration authority

<b>FIELDS</b>
Vessel name (if any)
Vessel register number
Fishery restricted area
Number of fishing days
Fishing Gear used in the fishery restricted area
Period authorized (if applicable) for fishing in the fishing restricted area

**Data (Optional)** – Countries are encouraged also to provide additional information regarding the equipment of the vessel (refrigeration, navigation, communication, fish processing etc.) and, if present, information on earlier history (previous vessel name and flag state etc.). The full list of optional data fields is summarized in the Table III.4.

**Table III.4 - Fishing vessel statistics**  
Optional data

<b>FIELDS</b>
Country
Reference year
Date
Registration authority
Vessel name (if any)
Vessel register number
IMO registration number
Previous vessel name (if any)
Previous flag State (if any)
Previous details of deletion from other registries (if any)
International radio call sign (if any)
Period authorized for fishing and/or transshipping
Power of auxiliary engine(s) (if any) kW
Hull material
Powered / Motorised
Fish hold capacity (m3)
Lights for fishing
Navigation equipment
Communication equipment
Fish finder
Deck machinery
Refrigeration equipment
Fish processing equipment
Safety equipment
Period authorized for fishing with demersal trawl gear (if applicable)

**Frequency and deadline of transmission** – Countries should submit the requested data, at least for the reference year n-1 by 31<sup>st</sup> May of each calendar year (n) (Appendix H). Data of vessels over 15 metres in length overall should be transmitted as any changes occurred, with particular attention to the authorized fishing period whose information need to be kept updated<sup>11</sup>.

<sup>11</sup> For the purpose of the recommendation GFCM/33/2009/6, the vessels larger than 15 meters in length overall not entered into the GFCM Authorized vessel list are deemed not to be authorized to fish for, retain on board, transship or land species covered by the Commission.

Data confidentiality – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables III.1, III.2 and III.3 once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission. Exception is made for information related to owner, operator and crew in Table III.2 which shall be made available to a restricted audience only and in accordance with agreed security provisions.

Countries are encouraged to respect this deadline and to provide all requested data. Tables III.1, III.2, and III.3 are mandatory. Countries are invited to provide also data as reported in Table III.4.

## 2.4 Task IV: Effort

**Description** – The fishing effort is a measure of the amount of fishing activity deployed. It can be calculated through a combination of inputs, related to capacity, gear units and time. Effort information is needed to analyse changes in the amount of catch, it is crucial for developing multiannual management plans. Usually, fishing effort is calculated by multiplying the fishing capacity deployed (i.e. total GT or power, number of hooks in longlines) by the period of time (number of hours or days spent fishing). Effort data can be obtained through various sources (logbooks, sampling, census, port surveys, etc.).

The catch per unit of fishing effort (CPUE) should also be reported within this task, only for the priority species belonging to Group 1 and Group 2. The CPUE is an index of fishing efficiency both in terms of abundance and economic value. In its basic form, the CPUE can be defined as the total catch of a species divided by the total fishing effort (e.g., number of fish per longline hook days) in a given period.

**Countries involved** – This task is addressed to all GFCM Members.

**Data (Mandatory)** – In order to compare and harmonize data, standard effort information is requested both for fishing capacity (e.g. GT, number of hooks) and activity (e.g. time fishing, number of trips). Information should be reported by GSA and fleet segment (Table IV.1). In order to draw a reliable picture of the CPUE, countries are requested also to complete Table IV.2 for the identified species of Group 1 and Group 2 (Appendix A – list of priority species). CPUE data should be reported by fishing gear and established nominal effort. Mandatory fishing effort measurements are described in Appendix F.

**Table IV.1 - Effort data per fleet segment**  
Mandatory data

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Fishing gear
Capacity
Activity
Nominal effort
Number of vessels

**Table IV.2 - CPUE**  
Mandatory data for species Group 1 and Group 2

<b>FIELDS</b>
Country
Reference year
GSA
Fishing Gear
Species
CPUE
Nominal effort

**Data (Optional)** – Countries should report here the estimated nominal effort based on other fishing capacity units (e.g. kW, length of the net) and activity, always by GSA and fleet segment (Table IV.3). Alternative units of fishing effort measurements (capacity and activity) are described in the Appendix G.

**Table IV.3 - Additional fishing effort measurements**  
Optional data

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Fishing Gear
Units of capacity
Capacity
Units of activity
Activity
Nominal effort
Number of vessels

**Frequency and deadline of transmission** – Countries should submit data pertaining to the previous year (year n-1) by 30 June of each calendar year (n) (Appendix H). Countries are encouraged to comply with this deadline and to provide all requested data.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables IV.1, IV.2 and IV.3 once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission.

## 2.5 Task V: Socio-economics

**Description** – The objective of this task is to collect information in order to monitor the economic status of the fishing sector. Data collected under this task is needed to develop appropriate policies and strategies, especially in relation to promoting the long-term sustainability of resources and fleets.

Economic and social information should be collected on yearly basis by area (GSA) and by fleet segment.

Economic and social data are generally collected through sampling surveys using questionnaires, but for some fleet segments and some variables other data sources could be used (e.g. administrative records, auction sales, and census).

Data collected under this task will help obtain:

- trends in production, economic performance and social indicators
- time series analysis of average annual prices for commercial species
- analysis of the profitability of the fleets (income, gross value added, operating cash flow)
- an accurate source of statistical data for landing values and prices
- a better knowledge of the fleet costs and their breakdown in different categories
- a complete picture of regional, subregional and national employment in the fishery sector.

**Countries involved** – This task is addressed to all GFCM Members.

**Data (Mandatory)** – The list of data fields and related definitions is reported in Table V.1, Table V.2 and Table V.3. Data is requested by fishing area (GSA) and fleet segment (Appendix B). Table V.1 includes data related to capacity, number of vessels, total landing values and total days at sea. This information should be reported on annual basis. In Table V.2 should be reported information on personnel costs, fuel consumption and price, and other operating costs. Table V.3 requires reporting information on volume and value of landings by commercial species. Data on prices, income and costs should be reported in national currency. Data requested in Table V.1 are mandatory with and yearly submission. Data requested in Tables V.2 and V.3 are mandatory but could be submitted on biannual basis.

**Table V.1 - Economic and social data: aggregated information**  
Mandatory data (on annual basis)

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Capacity, GT
Capacity, Engine power
Number of vessels
Total landings value
Total days at sea

**Table V.2 - Economic and social data: aggregated information**  
Mandatory data (on biannual basis)

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Number of vessels
Personnel costs
Fuel consumption

<b>FIELDS</b>
Fuel price
Repair and maintenance costs
Commercial costs
Other variable costs
Capital costs
Value of physical capital
Fixed costs
Employment
Currency

**Table V.3 - Economic and social data: information by species**  
Mandatory data for species Group 1 and Group 2 (on biannual basis)

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Number of vessels
Species
Total landing volume (Tonnes)
Total landings value
Prices by commercial species
Conversion factors per species
Currency

**Data (Optional)** – Countries are encouraged to provide additional information regarding socio-economic aspects, such as operating subsidies, number of people involved in the crew and roughly divided by age, investments in physical capital. The full list of optional data fields is summarized in Table V.4. Data requested in Tables V.4 are optional and could be submitted on biannual basis.

**Table V.4 - Economic and social data**  
Optional data (on biannual basis)

<b>FIELDS</b>
Country
Reference year
GSA
Fleet segment
Operating subsidies
Investments in physical capital
Other income
Full time equivalent (FTE)
Number of persons in the crew, < 25 years old
Number of persons in the crew, 25-40 years old
Number of persons in the crew, > 40 years old
Currency

**Frequency and deadline of transmission** – Countries should submit data, as requested in Table V.1 and pertaining to the previous year, within 30 November (n-1) of each calendar year (n) (Appendix H). Information requested in Tables V.2, V.3 and V.4 could be submitted every two years. Countries are encouraged to comply with this deadline and to provide all requested data.

Data confidentiality – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Table V.1 once transmitted to GFCM, may be made available to the public without any restriction in conformity with the guidance of the Commission. Data in Tables V.2, V.3 and V.4 shall be made available to a restricted audience only and in accordance with agreed security provisions.

## 2.6 Task VI: Biological information

### *Subtask VI.1 – Stock assessment*

**Description** – Regular fish stock assessments provide important information to provide fisheries managers with reliable figures for sound decision-making regarding the management of fish stocks. Conservation and management measures should be based on the best scientific advice produced by the Scientific Advisory Committee (SAC), the GFCM dedicated body. The main Task conferred to SAC is to assess the status of (major) stocks exploited in the GFCM area. This task needs to be supported by the timely provision by countries of relevant and accurate data concerning inputs (fleets, efforts) and outputs (catches, including discards).. For this purpose, SAC has developed standard forms and procedures to present data and results on stock assessment in the Mediterranean and Black Sea (stock assessment form - <http://www.gfcm.org/gfcm/topic/16086/en>).

Stock assessments are based on models of population dynamics requiring three primary categories of information: catch, abundance, and biology (e.g. growth, size at first maturity and size at recruitment). All the requested information must be submitted using the stock assessment forms.

Countries whose fisheries are based on the same stock, are encouraged to submit a single stock assessment form. According to the SAC glossary, shared stocks<sup>12</sup> are the “stocks fished by two or more countries”. The list of identified shared stocks is reported in Appendix I (SAC October 2006 – GFCM, 2006).

**Countries involved** - This task is addressed to all GFCM Members.

**Data (Mandatory)** - Countries should provide the GFCM Secretariat with the name of the species/stock, GSA, year, catches, fishing gear as well as a short description of the fleet, historical trends and a list of reference points (i.e. F, SSB etc.). Moreover, some biological parameters, such as maximum size, size at first maturity and size at recruitment, length weight relationships and growth parameters, should be reported. All necessary information is fully described in the stock assessment form (<http://www.gfcm.org/gfcm/topic/16086/en>). .

**Frequency and deadline of transmission** - Countries should submit the stock assessment form pertaining to the previous year (n-1) by 30 September of each calendar year (n) (Appendix H).

Data confidentiality – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information under

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<sup>12</sup> In the Mediterranean, although the importance of shared fishery resources is widely recognized, the list of priority shared fishery stocks would require a more in-depth analysis both in terms of consistency and homogeneity, as discussed during the 31st session of the GFCM (Rome, 2007).



Subtask VI.1 once transmitted to GFCM, may be made available to a restricted audience only in conformity with the guidance of the Commission and in accordance with agreed security provisions.

### **Subtask VI.2 – Length data**

**Description** – Length data refer to the observed size frequency of fish measured according to a given biological sampling plan. The scope of this subtask is to investigate the length distribution of catches (landings and discards) for the species reported in the different identified groups (Group 1, 2 and 3) of priority species. Samples might derive (i.e. source of data) both from fishery dependent data and/or fishery-independent data: experimental scientific surveys, observers onboard, observers at landing place, at market or from any other fishery sampling programme. The length distribution should be reported by GSA and fleet segment (fishing gear, in case of experimental surveys, should be also reported). For sampling purposes, the three groups of priority species groups (Appendix A - Priority Species) should to be considered.

**Countries involved** - This task is addressed to all GFCM Members.

**Data (Mandatory)** For all the species selected in Group 1, Group 2 and Group 3 (Appendix A), a minimum set of parameters, including the number of fish specimens per different length class by fleet segment (Appendix B), should be reported (Table VI.2.1). When the data are collected directly from the commercial fishery (i.e. fishery dependent data) the number of measured specimens, for each length class, should be expanded to the total catch (landing and/or discard) of that species.

**Table VI.2.1 – Length data**  
Mandatory data for species Group 1, Group 2 and Group 3

<b>FIELDS</b>
Country
Reference year
GSA
Source of data
Fleet segment
Fishing gear
Species
Length
Number of individuals measured
Number of individuals expanded*
Commercial or discarded fraction*

*\* If data come from a sampling program*

**Data (Optional)** – Countries are encouraged to provide additional information regarding the size at first maturity ( $L_{50}$  - length at which 50% of the individuals are mature). The full list of optional data fields is summarized in Table VI.2.2.

**Table VI.2.2 – Size at first maturity**  
Optional data for species Group 1, Group 2 and Group 3

<b>FIELDS</b>
Country
Reference year
GSA
Source of data

<b>FIELDS</b>
Fleet segment
Fishing gear
Species
L <sub>50</sub>

**Frequency and deadline of transmission** – Countries should submit data pertaining to the previous year (year n-1) by 31 July of each calendar year (n) (Appendix H). Length data (Table VI.2.1) are mandatory for all the species identified in the priority list of species (Appendix A). Sizes at first maturity data are optional for species Group 1, Group 2 and Group 3 (Table VI.2.2). Countries are encouraged to comply with this deadline and provide all requested data.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables VI.2.1 and VI.2.2 once transmitted to GFCM, may be made available to a restricted audience only in conformity with the guidance of the Commission and in accordance with agreed security provisions.

### ***Subtask VI.3 – Other biological data***

**Description** – The objective of this subtask is to collect information in order to monitor and to investigate the population dynamics of the most important species in the different subregions. The following variables, by fleet segment and for Group 1 species identified and listed in Appendix A, should be reported:

- individual information on sex;
- individual information on age;
- individual information on maturity state;

The samples may be collected during fishery-independent surveys and/or obtained from observers onboard and/or at landing place or in any other fishery sampling programme. This information should cover both the landed and the discarded fraction of the catch.

**Countries involved** – This task is addressed to all GFCM Members.

**Data (Mandatory)** – For sampling purposes, only the priority species identified in Group 1 (Appendix A - Priority Species) should be considered. Countries should provide the GFCM Secretariat with the number of fish specimens measured by age, sex and maturity (Tables VI.3.1 and VI.3.2) and per different fleet segment (Appendix B). When the data are collected directly from the commercial fishery (i.e. fishery dependent data) the number of measured specimens, per each length classes, should be expanded to the total catch (landing and/or discard) of that species.

**Table VI.3.1 – Age data**  
Mandatory data for species Group 1

<b>FIELDS</b>
Country
Reference year
GSA
Source of data
Fleet segment

<b>FIELDS</b>
Fishing gear
Species
Length
Age
Sex
Number of individuals measured
Number of individuals expanded*
Commercial or discarded fraction*

*\* If data come from a sampling program*

**Table VI.3.2 – Maturity data**  
Mandatory data for species Group 1

<b>FIELDS</b>
Country
Reference year
GSA
Source of data
Fleet segment
Fishing gear
Species
Length
Sex
Maturity
Number of individuals measured
Number of individuals expanded*
Commercial or discarded fraction*

*\* If data come from a sampling program*

**Frequency and deadline of transmission** – Countries should submit data pertaining to the previous year (year n-1) by 31 July of each calendar year (n) (Appendix H). Data requested in Tables VI.3.1 and VI.3.2 are mandatory only for species identified in the Group 1 list (Appendix A). Countries are encouraged to comply with this deadline and provide all requested data.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables VI.3.1 and VI.3.2 once transmitted to GFCM, may be made available to a restricted audience only in conformity with the guidance of the Commission and in accordance with agreed security provisions.

#### ***Subtask VI.4 – Dolphin fish***

**Description** – The objective of this task is to collect information related to the fishing activities regarding dolphin fish (*Coryphaena hippurus*). Dolphin fish is an epipelagic species living in open waters but which also approaches the coast following ships and gathering in small groups below floating objects. Fishing aggregation devices (FADs) are used to concentrate dolphin fish before the nets are set. This is a traditional fishery particularly for the western–central Mediterranean.

**Countries involved** – This task is mainly addressed to Greece, Italy, Malta, Spain, and Tunisia.

**Data (Mandatory)** – Countries should communicate to the GFCM Secretariat data on the year, fishing period, GSAs of fishing operation, total landing and number of vessels involved (Table VI.4.1).

**Table VI.4.1 – Dolphin fish**  
Mandatory data

<b>FIELDS</b>
Country
Reference year
Fishing period
GSAs of fishing operation
Total landing
Number of vessels involved in the fishery

**Data (Optional)** – Countries are encouraged to provide additional information on some aspects related to the dolphin fish fishery. This information, such as operating subsidies, number of people involved in the crew roughly divided by age, investments in physical capital should be reported. The full list of optional data fields is summarized in the Table VI.4.2.

**Table VI.4.2 - Dolphin fish statistics**  
Optional data

<b>FIELDS</b>
Country
Reference year
Total GT of vessels involved in the fishery
Length range of vessels involved in the fishery (m)
Average length of vessels involved in the fishery (m)
Estimated total catch
Estimated total effort (number of FADs, number of fishing trips)
Average size of fish caught (at the beginning and at the end of the season)
Total transshipments
System of collection and treatment of catch and effort data

**Frequency and deadline of transmission** – Countries should submit data pertaining to the previous year (n-1) by 31 July of each calendar year (n) (Appendix H). Collection for data present in Table VI.4.1 is mandatory. However, if collected, countries are invited to provide also data in Table VI.4.2.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables VI.4.1 and VI.4.2 once transmitted to GFCM, may be made available to a restricted audience only in conformity with the guidance of the Commission and in accordance with agreed security provisions.

#### **Subtask VI.5 – Red coral**

**Description** – Red coral (*Corallium rubrum*) in the Mediterranean has experienced a decrease in landings over the past 30 years. At the request of its Members, the GFCM has engaged in several actions that have resulted in two recommendations (GFCM/35/2011/2 and GFCM/36/2012/1) regarding the submission of data by Members operating in this fishery.

Recommendation GFCM/35/2011/2 states that Member countries should report catches and fishing effort by area and depth. Biological information from research projects and relevant to stock assessment must also be included in the forms of the ad hoc entry tool developed by the Secretariat as presented in tables VI.5.1 to VI.5.3.

Within this framework, the data collection of this very valuable fishery both from the economic and ecological points of view will be the first standardized and systematic collection of primary information enabling to draw a reliable picture of the status of this species. This is the reason why the data requested should be very comprehensive, ranging from administrative issues to catches and growth.

**Countries involved** – This task is addressed to Albania, Algeria, Croatia, France, Greece, Italy, Malta, Morocco, Spain and Tunisia.

**Data (Mandatory)** – Data on harvest, effort, location of banks, size of colonies gathered (measured at 1 cm above their base) and different management schemes in force are mandatory (Tables VI.5.1 and VI.5.2).

**Table VI.5.1 - Red coral (management)**

Mandatory data

<b>FIELDS</b>
Reference year
Country
Reporting authority / institution
Reference to national/regional legislations
How many areas have been identified?
How many areas are harvested?
Are there "no take zones" for red coral?
If yes: specify the number
Are those within a marine protected area (MPA) or any type of marine reserve?
If yes: give the name and geographical coordinates of their limits
Is there any marine protected area (MPA) or marine reserve specifically aimed at protecting red coral?
If yes: provide the name and geographical coordinates of their limits
Is there alternate areas system in place?
If yes: how many areas?
How long intervals?
Number of harvesting licenses in the country
Number of active licenses (current year)
Cost of license fee per year
Permitted quota (annually or daily) per active license
Period in which harvest of red coral is allowed
Legal minimum size
Percentage of allowance
Depth range allowed
Is harvest declared by divers?
Is the logbook mandatory?
Is the harvest recorded by authorities?
How is the minimum size controlled?
Is there a programme for observers on board?
Is there a programme for observers at landing site?

<b>FIELDS</b>
Designated ports for landing red coral
Are sale notes mandatory?
Are data on the buyer and seller registered?
Number of ROV authorizations for prospection purposes
Date of issuance
Name of the research projects in which ROV have been authorized (if any)
Is there any biological sampling programme in place?
Is there any research project in place?
Name of the sampling programme
Responsible institution
Title of the project
Coordinator

**Table VI.5.2 - Red coral (harvest)**  
Mandatory data

<b>Fields</b>
Reference year
Country
Reporting authority / institution
GFCM geographical area (GSA)
Statistical grid
Area (name)
Size of the area (approx. in m <sup>2</sup> )
Name of the closest landing port
Distance from the area to the port (NM)
Number of days at sea
Effort (no. of dives)
Depth range
Total weight
Nb. of colonies
Average diameter (mm)
% in weight of undersized colonies

**Data (Optional)** – Additional biological information on growth and mortality is optional and can be provided if there is some sampling or research programme running. Biological parameters are not easily available for most fishing areas and unless specific research projects are in place there may be gaps of various years between data collection campaigns which are optional (biological parameters only available through research projects). Data requested (Table VI.5.3) are related to population density, colony growth rate, population size and age structure, population reproductive features and recruitment rates, and information on red coral mortality (by fish, natural and total).

**Table VI.5.3 - Red coral (biology)**  
Optional data

<b>Fields</b>
GFCM geographical area (GSA)
Statistical grid
Area (name)
Size of the bank (approx. in m2)
Latitude
Longitude
Depth range
Diameter minimum
Diameter maximum
Diameter average
Growth rate
Age/size at first reproduction (diameter/age)
Diameter vs weight formula
Recruitment
Mortality M
Mortality F
Mortality Z
Biological sampling programme/project (name)
Have the data been published? If so please provide reference:

**Frequency and deadline of transmission** – Compulsory data on red coral management (Table VI.5.1) and harvest (Table VI.5.2) for the previous calendar year (n-1) should be submitted by the national focal point to the GFCM Secretariat by 31 June of each calendar year (n) (Appendix H). Countries are invited to provide also data relating to the biology of red coral (Table VI.5.3), if collected.

**Data confidentiality** – Data transmitted by members will be treated in accordance with all necessary measures to comply with the GFCM security and confidentiality provisions. All the information in Tables VI.5.1, VI.5.2 and VI.5.3 once transmitted to GFCM, may be made available to a restricted audience only in conformity with the guidance of the Commission and in accordance with agreed security provisions.

## Appendix A - Priority Species

The concept of priority species represents a key factor for the management of fisheries resources. Priority species, in the context of data collection, are those for which the most complete set of data are required. Their identification has to be based on criteria relevant to the objectives of the Commission: development, conservation and management. In this regard, not only abundance but also the price and/or the market demand as well as ecological importance should be taken into account.

For this proposal, priority species have been identified taking into account the above mentioned criteria, (i.e. abundance, economic value and conservation status) but also their importance in the different sub-regions has been considered.

According to these criteria, three different groups have been established whereby species are listed at different geographical scales (sub-region or GFCM level), the first group according to the **frequency of assessments** done (e.g. species that are regularly assessed), the second one according to the **fishery importance** (i.e. landing and/or economic value), and the last one based on **conservation criteria** (i.e. endangered species) or impact of their presence in the *ecosystem* (i.e. *non-indigenous species*).

**Group 1:** Species that drive the fishery and for which assessment is regularly carried out;

**Group 2:** Species that are important in terms of landing and/or economic values at regional and sub-regional level and for which assessment is not regularly carried out.

**Group 3:** Species under international or national management plans; species under recovery and/or action plans for conservation. This Group 3 should also contain a list of non-indigenous species with the greatest potential impact.

Three lists of species have been proposed as presented in tables below (Table 3.1, 3.2 and 3.3). This preliminary classification needs to be agreed upon during the current consultation phase including the SAC session.

Countries pertaining to a subregional group are called to collect the requested biological information for all the species listed in the group except for species that are not important at country level according to one of the following criteria:

- 1) the species is/are not present in the country;
- 2) the landings by weight of the species is less than 15%<sup>13</sup> of the total subregion landings;
- 3) the landings by weight of the species is less than 500<sup>9</sup> tonnes.

The three proposed exemption rules are applicable to all the countries within each group of identified species. However, the transmission of biological data (i.e. length) is strongly encouraged at least for elasmobranch species (G3). It aims at improving the knowledge especially for some of the elasmobranch species which are rare, with a sporadic and not confirmed presence in the Mediterranean.

For all the selected species in Group 1, Group 2 and Group 3, a minimum set of parameters, including length per fleet segment, should be collected (Subtask VI.2 “Length data”).

Individual information on sex, age and maturity state should be reported for species of G1. Country are kindly invited to provide this information also for species of G2 and G3 should it be available.

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<sup>13</sup> Those are proxy values, further analyses are expected in order to reach acceptable ranges.



The number of individuals measured in a sample must ensure quality and accuracy of resultant length frequency. The choice of the sampling methodology has to be done considering both the periodicity and the diversity of species to sample.

The proposed list of species has to be considered dynamic. Therefore changes could occur on the basis of the information gathered in the future.

**Table 3.1** - Group 1 Species. Species that drive the fishery and for which assessment is regularly carried out.

	<b>Western Mediterranean</b>	<b>Central Mediterranean</b>	<b>Eastern Mediterranean</b>	<b>Black Sea</b>
	<i>Algeria, France, Morocco, Spain</i>	<i>Albania, Croatia, Italy, Libia, Malta, Montenegro, Slovenia, Tunisia</i>	<i>Cyprus, Egypt, Greece, Lebanon, Syria, Israel, Turkey</i>	<i>Bulgaria, Romania, Turkey</i>
<i>Engraulis encrasicolus</i>	X	X	X	X
<i>Merluccius merluccius</i>	X	X	X	
<i>Mullus barbatus</i>	X	X	X	
<i>Mullus surmuletus</i>	X	X	X	
<i>Nephrops norvegicus</i>	X	X		
<i>Parapenaeus longirostris</i>	X	X	X	
<i>Psetta maxima</i>				X
<i>Sardina pilchardus</i>	X	X	X	
<i>Sprattus sprattus</i>				X
<i>Squalus acanthias</i> *				X
<i>Trachurus mediterraneus</i>				X

\* Species included in the Appendix III (species whose exploitation is regulated) of the Barcelona Convention (Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean)

**Table 3.2 - Group 2 Species.** Species that are important in terms of landing and/or economic values at regional and sub-regional level and for which assessment is not regularly carried out.

	<b>Western Mediterranean</b>	<b>Central Mediterranean</b>	<b>Eastern Mediterranean</b>	<b>Black Sea</b>
	<i>Algeria, France, Morocco, Spain</i>	<i>Albania, Croatia, Italy, Libia, Malta, Montenegro, Slovenia, Tunisia</i>	<i>Cyprus, Egypt, Greece, Lebanon, Syria, Israel, Turkey</i>	<i>Bulgaria, Romania, Turkey</i>
<i>Alosa pontica</i>				X
<i>Aristaeomorpha foliacea</i>		X		
<i>Aristeus antennatus</i>	X			
<i>Boops boops</i>	X		X	
<i>Chamelea gallina</i>		X		
<i>Coryphaena hippurus</i>		X		
<i>Diplodus annularis</i>		X		
<i>Eledone cirrhosa</i>		X		
<i>Eledone moschata</i>		X		
<i>Galeus melastomus</i>		X		
<i>Illex coindetii</i>		X		
<i>Lophius budegassa</i>	X	X		
<i>Merlangius merlangius</i>				X
<i>Micromesistius poutassou</i>	X			
<i>Octopus vulgaris</i>	X	X	X	
<i>Pagellus bogaraveo</i>	X			
<i>Pagellus erythrinus</i>		X		
<i>Raja asterias</i>		X		
<i>Raja clavata</i>		X		
<i>Sardinella aurita</i>	X			
<i>Saurida undosquamis</i>			X	
<i>Scomber japonicus</i>	X		X	
<i>Scomber scombrus</i>	X			
<i>Sepia officinalis</i>	X	X		
<i>Siganus luridus</i>			X	
<i>Siganus rivulatus</i>			X	
<i>Solea vulgaris</i>		X	X	
<i>Sphyrnaena sphyraena</i>		X		
<i>Spicara smaris</i>			X	
<i>Squilla mantis</i>		X		
<i>Trachurus mediterraneus</i>	X		X	
<i>Trachurus picturatus</i>	X			
<i>Trachurus trachurus</i>	X		X	

**Table 3.3** - Group 3 Species. Species under international or national management plans; species under recovery and/or action plans for conservation; non-indigenous species with the greatest potential impact.

	<b>Western Mediterranean</b>	<b>Central Mediterranean</b>	<b>Eastern Mediterranean</b>	<b>Black Sea</b>
	<i>Algeria, France, Morocco, Spain</i>	<i>Albania, Croatia, Italy, Libia, Malta, Montenegro, Slovenia, Tunisia</i>	<i>Cyprus, Egypt, Greece, Lebanon, Syria, Israel, Turkey</i>	<i>Bulgaria, Romania, Turkey</i>
<i>Alopias superciliosus</i>	X	X	X	
<i>Alopias vulpinus</i>	X	X	X	X
<i>Carcharhinus plumbeus*</i>	X	X	X	
<i>Centrophorus granulosus</i>	X	X	X	
<i>Dalatias licha</i>	X	X	X	
<i>Dipturus oxyrinchus</i>	X	X	X	
<i>Etmopterus spinax</i>	X	X	X	
<i>Galeus melastomus</i>	X		X	
<i>Heptranchias perlo*</i>	X	X	X	
<i>Hexanchus griseus</i>	X	X	X	
<i>Mustelus asterias*</i>	X	X	X	
<i>Mustelus mustelus*</i>	X	X	X	
<i>Mustelus punctulatus*</i>	X	X	X	
<i>Myliobatis Aquila</i>	X	X	X	
<i>Prionace glauca*</i>	X	X	X	
<i>Pteroplatytrygon violacea</i>	X	X	X	
<i>Raja asterias</i>	X		X	
<i>Raja clavata</i>	X		X	X
<i>Raja miraletus</i>	X	X	X	
<i>Raja undulate</i>	X	X	X	
<i>Scyliorhinus canicula</i>	X	X	X	X
<i>Scyliorhinus stellaris</i>	X	X	X	
<i>Sphyrna tudes</i>	X	X	X	X
<i>Squalus acanthias*</i>	X	X	X	
<i>Squalus blainvillei</i>	X	X	X	
<i>Torpedo marmorata</i>	X	X	X	
<i>Fistularia commersonii</i>			X	
<i>Lagocephalus sceleratus</i>			X	
<i>Marsupenaeus japonicus</i>			X	
<i>Metapenaeus stebbingi</i>			X	
<i>Scomberomorus commerson</i>			X	

\* Species included in the Appendix III (species whose exploitation is regulated) of the Barcelona Convention (Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean)

## Appendix B - Fleet segments

(combination of vessel group and length classes)

<i>Vessel groups*</i>		<i>Length classes (LOA)</i>				
		< 6 m	6 - 12 m	12-24 m	> 24 m	
Polyvalent	<b>P</b>	Small-scale vessels without engine	P-01	P-02	P-03	P-04
		Small-scale vessels with engine	P-05	P-06	P-07	P-08
		Polyvalent vessels	P-09	P-10	P-11	P-12
Seiners	<b>S</b>	Purse seiners	S-01	S-02	S-03	S-04
		Tuna seiners	S-05	S-06	S-07	S-08
Dredgers	<b>D</b>	Dredgers	D-01	D-02	D-03	D-04
Trawlers	<b>T</b>	Beam trawlers	T-01	T-02	T-03	T-04
		Pelagic trawlers	T-05	T-06	T-07	T-08
		Trawlers	T-09	T-10	T-11	T-12
Long liners	<b>L</b>	Long liners	L-01	L-02	L-03	L-04

*\* Vessel is assigned to a group on the basis of the dominance criteria in terms of percentage of time at sea using the same fishing gear (Appendix D) within the year*

**Appendix C - Fisheries restricted areas (FRAs)**

<b>Name of the FRA</b>	<b>Country</b>	<b>GSA</b>	<b>km<sup>2</sup></b>
<i>Lophelia reef</i> off Capo Santa Maria di Leuca	Italy	GSA 19	1 672.6
The Nile delta area cold hydrocarbon seeps	Egypt	GSA 26	6 042.6
The Eratosthene Seamount	Cyprus	GSA 25	14 791.6
Gulf of Lion	France	GSA 7	3 741.6

### Appendix D - Fishing gear<sup>14</sup>

Class	Code	Name
Surrounding Nets	LA	Without purse lines (lampara)
	PS	With purse lines (purse seines)
	PS1	One boat operated purse seines
	PS2	Two boats operated purse seines
Seine Nets	SB	Beach seines
	SDN	Danish seines
	SPR	Pair seines
	SSC	Scottish seines
	SV	Boat or vessel seines
	SX	Seine nets (not specified)
Trawls	OT	Otter trawls (not specified)
	OTB	Bottom otter trawls
	OTM	Midwater otter trawls
	OTT	Otter twin trawls
	PT	Pair trawls (not specified)
	PTB	Bottom pair trawls
	PTM	Midwater pair trawls
	TB	Bottom trawls
	TBB	Bottom beam trawls
	TBN	Bottom nephrops trawls
	TBS	Bottom shrimp trawls
	TM	Midwater trawls
	TMS	Midwater shrimp trawls
TX	Other trawls (not specified)	
Dredges	DRB	Boat dredges
	DRH	Hand dredges
Lift Nets	LN	Lift nets (not specified)
	LNB	Boat-operated lift nets
	LNP	Portable lift nets
	LNS	Shore-operated stationary lift nets
Falling Gear	FCN	Cast nets
	FG	Falling gear (not specified)
Gillnets and Entangling Nets	GEN	Gillnets and entangling nets (not specified)
	GN	Gillnets (not specified)
	GNC	Encircling gillnets
	GND	Driftnets
	GNF	Fixed gillnets (on stakes)
	GNS	Set gillnets (anchored)
	GTN	Combined gillnets-trammel nets
	GTR	Trammel nets

<sup>14</sup> International Standard Statistical Classification of Fishing Gear (ISSCFG)

Class	Code	Name
Traps	FAR	Aerial traps
	FIX	Traps (not specified)
	FPN	Stationary uncovered pound nets
	FPO	Pots
	FSN	Stow nets
	FWR	Barrier, fences, weirs, etc
	FYK	Fyke nets
Hooks and Lines	LHM	Handlines and pole-lines (mechanised)
	LHP	Handlines and pole-lines (hand operated)
	LL	Longlines (not specified)
	LLD	Drifting longlines
	LLS	Set longlines
	LTL	Trolling lines
	LX	Hooks and lines (not specified)
Grappling and Wounding	HAR	Harpoons
	HMP	Pumps
Harvesting Machines	HMD	Mechanised dredges
	HMX	Harvesting machines (not specified)
Miscellaneous Gear	MIS	Miscellaneous gear
Recreational Fishing Gear	RG	Recreational fishing gear
Gear Not Known or Not Specified	NK	Gear not known or not specified

## Appendix E - Vulnerable species

Group of vulnerable species	Family	Species	Common name
Cetaceans	Balaenopteridae	<i>Balaenoptera acutorostrata</i>	Common minke whale
		<i>Balaenoptera borealis</i>	Sei whale
		<i>Balaenoptera physalus</i>	Fin whale
		<i>Megaptera novaeangliae</i>	Humpback whale
	Balenidae	<i>Eubalaena glacialis</i>	North Atlantic right whale
	Physeteridae	<i>Physeter macrocephalus</i>	Sperm whale
		<i>Kogia simus</i>	Dwarf Sperm Whale
	Phocoenidae	<i>Phocoena phocoena</i>	Harbor porpoise
	Delphinidae	<i>Steno bredanensis</i>	Rough-toothed dolphin
		<i>Grampus griseus</i>	Risso's dolphin
		<i>Tursiops truncatus</i>	Common bottlenose dolphin
		<i>Stenella coeruleoalba</i>	Striped dolphin
		<i>Delphinus delphis</i>	Common dolphin
		<i>Pseudorca crassidens</i>	False killer whale
		<i>Globicephala melas</i>	Long-finned pilot whale
		<i>Orcinus orca</i>	Killer whale
	Ziphiidae	<i>Ziphius cavirostris</i>	Cuvier's beaked whale
<i>Mesoplodon densirostris</i>		Blainville's beaked whale	
Seals	Phocidae	<i>Monachus monachus</i>	Mediterranean monk seal
Sharks, Rays, Chimaeras*	Carcharhinidae	<i>Carcharias taurus</i>	Sand tiger
		<i>Carcharodon carcharias</i>	Great white shark
		<i>Prionace glauca</i>	Blue shark
	Cetorhinidae	<i>Cetorhinus maximus</i>	Basking shark
	Gymnuridae	<i>Gymnura altavela</i>	Spiny butterfly ray
	Lamnidae	<i>Isurus oxyrinchus</i>	Shortfin mako
		<i>Lamna nasus</i>	Porbeagle
Myliobatidae	<i>Mobula mobular</i>	Devil fish	



Group of vulnerable species	Family	Species	Common name
Sharks, Rays, Chimaeras	Odontaspidae	<i>Odontaspis ferox</i>	Small-tooth sand tiger shark
	Oxynotidae	<i>Oxynotus centrina</i>	Angular rough shark
	Pristidae	<i>Pristis pectinata</i>	Smalltooth Sawfish
		<i>Pristis pristis</i>	Common sawfish
	Rajidae	<i>Dipturus batis</i>	Common skate
		<i>Leucoraja circularis</i>	Sandy ray
		<i>Leucoraja melitensis</i>	Maltese skate
		<i>Rostroraja alba</i>	Bottlenose skate
	Rhinobatidae	<i>Rhinobatos cemiculus</i>	Blackchin guitarfish
		<i>Rhinobatos rhinobatos</i>	Common guitarfish
	Sphyrnidae	<i>Sphyrna lewini</i>	Scalloped hammerhead
		<i>Sphyrna mokarran</i>	Great hammerhead
		<i>Sphyrna zygaena</i>	Smooth hammerhead
	Squatinaidae	<i>Squatina aculeata</i>	Sawback angel shark
<i>Squatina oculata</i>		Smoothback angel shark	
<i>Squatina squatina</i>		Angel shark	
Triakidae	<i>Galeorhinus galeus</i>	School/Tope shark	
Sea Turtles	Cheloniidae	<i>Caretta caretta</i>	Loggerhead turtle
		<i>Chelonia mydas</i>	Green turtle
	Dermochelyidae	<i>Dermochelys coriacea</i>	Leatherback sea turtle
Sea birds	Falconidae	<i>Falco eleonora</i>	Eleonora's Falcon
	Cerylidae	<i>Ceryle rudis</i>	Pied Kingfisher
	Charadriidae	<i>Charadrius alexandrinus</i>	Kentish Plover
		<i>Charadrius leschenaultii columbinus</i>	Greater Sand Plover
	Halcyonidae	<i>Halcyon smyrnensis</i>	White-throated Kingfisher
	Hydrobatidae	<i>Hydrobates pelagicus</i>	European Storm-Petrel
		<i>Hydrobates pelagicus melitensis</i>	European Storm-Petrel
		<i>Hydrobates pelagicus pelagicus</i>	European Storm-Petrel
	Laridae	<i>Larus audouinii</i>	Audouin's Gull
<i>Larus armenicus</i>		Armenian Gull	
<i>Larus genei</i>		Slender-billed Gull	

Group of vulnerable species	Family	Species	Common name
Sea birds		<i>Larus melanocephalus</i>	Mediterranean Gull
	Pandionidae	<i>Pandion haliaetus</i>	Osprey
	Pelecanidae	<i>Pelecanus crispus</i>	Dalmatian Pelican
		<i>Pelecanus onocrotalus</i>	Great White Pelican
	Phalacrocoracidae	<i>Phalacrocorax aristotelis</i>	European Shag
		<i>Phalacrocorax pygmaeus</i>	Pygmy Cormorant
	Phoenicopteridae	<i>Phoenicopterus ruber</i>	American Flamingo
	Procellariidae	<i>Calonectris diomedea</i>	Cory's Shearwater
		<i>Puffinus puffinus yelkouan</i>	Yelkouan Shearwater
		<i>Puffinus yelkouan</i>	Mediterranean Shearwater
		<i>Puffinus muretanicus</i>	Balearic Shearwater
	Scolopacidae	<i>Numenius tenuirostris</i>	Slender-billed Curlew
	Sternidae	<i>Sterna albifrons</i>	Little Tern
		<i>Sterna bengalensis</i>	Lesser Crested Tern
		<i>Sterna sandvicensis</i>	Sandwich Tern
<i>Sterna caspia</i>		Caspian Tern	
<i>Sterna nilotica</i>		Gull-billed Tern	

**Note** - List of vulnerable species included in the Appendix II (endangered or threatened species) and Appendix III (species whose exploitation is regulated) of the Barcelona Convention (*Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean*).

In the list are present also the "Amendments of the list of Annexes II and III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean" (2012/510/EU: *Council Decision of 10 July 2012 establishing the position to be adopted on behalf of the European Union with regard to the amendments to Annexes II and III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, adopted by the seventeenth meeting of the Contracting Parties (Paris, France, 8 - 10 February 2012)* )

## Appendix F - Fishing Effort Measurement

*Mandatory*

Fishing gear class	Fishing gear		Unit of Capacity	Unit of Activity	Nominal Effort
Surrounding Nets	PS	With purse lines (purse seines)	GT	Fishing sets	GT*fishing sets
	PS1	One boat operated purse seines			
	PS2	Two boats operated purse seines			
	LA	Without purse lines (lampara)			
Seine Nets	SB	Beach seines	Net length and drop	Fishing days	Net length and drop*Fishing days
	SV	Boat or vessel seines			
	SDN	Danish seines			
	SSC	Scottish seines			
	SPR	Pair seines			
	SX	Seine nets (not specified)			
Trawls	TB	Bottom trawls	GT	Fishing days	GT*Fishing days
	TBB	Bottom beam trawls			
	OTB	Bottom otter trawls			
	PTB	Bottom pair trawls			
	TBN	Bottom nephrops trawls			
	TBS	Bottom shrimp trawls			
	TM	Midwater trawls			
	OTM	Midwater otter trawls			
	PTM	Midwater pair trawls			
	TMS	Midwater shrimp trawls			
	OTT	Otter twin trawls			
	OT	Otter trawls (not specified)			
	PT	Pair trawls (not specified)			
	TX	Other trawls (not specified)			
Dredges	DRH	Hand dredges	GT	Fishing days	GT*Fishing days
	DRB	Boat dredges			
Harvesting Machines	HMD	Mechanised dredges			

Fishing gear class	Fishing gear		Unit of Capacity	Unit of Activity	Nominal Effort
Gillnets and Entangling Nets	GNS	Set gillnets (anchored)	Net length and drop	Fishing days	Net length*Fishing days
	GND	Driftnets			
	GNC	Encircling gillnets			
	GNF	Fixed gillnets (on stakes)			
	GTR	Trammel nets			
	GTN	Combined gillnets-trammel nets			
	GEN	Gillnets and entangling nets (not specified)			
	GN	Gillnets (not specified)			
Traps	FPN	Stationary uncovered pound nets	Number of traps/pots	Fishing days	Number of traps/pots*Fishing days
	FPO	Pots			
	FYK	Fyke nets			
	FSN	Stow nets			
	FWR	Barrier, fences, weirs, etc			
	FAR	Aerial traps			
	FIX	Traps (not specified)			
Hooks and Lines	LHP	Handlines and pole-lines (hand operated)	Number of hooks	Fishing days	Number of hooks*Fishing days
	LHM	Handlines and pole-lines (mechanised)			
	LLS	Set longlines			
	LLD	Drifting longlines			
	LL	Longlines (not specified)			
	LTL	Trolling lines			
	LX	Hooks and lines (not specified)			

### Appendix G - Additional Fishing Effort Measurements

*Optional*

Fishing gear class	Fishing gear		Unit of Capacity	Unit of Activity	Nominal Effort
Surrounding Nets	PS	With purse lines (purse seines)	Length and drop of the net	Fishing sets	Length of the nets*fishing sets
	PS1	One boat operated purse seines			
	PS2	Two boats operated purse seines			
	LA	Without purse lines (lampara)			
Trawls	TB	Bottom trawls	GT; kW	Fishing hours; Fishing days	GT*Fishing hours; kW*Fishing days
	TBB	Bottom beam trawls			
	OTB	Bottom otter trawls			
	PTB	Bottom pair trawls			
	TBN	Bottom nephrops trawls			
	TBS	Bottom shrimp trawls			
	TM	Midwater trawls			
	OTM	Midwater otter trawls			
	PTM	Midwater pair trawls			
	TMS	Midwater shrimp trawls			
	OTT	Otter twin trawls			
	OT	Otter trawls (not specified)			
	PT	Pair trawls (not specified)			
	TX	Other trawls (not specified)			
Gillnets and Entangling Nets	GNS	Set gillnets (anchored)	Net length and drop	Fishing days	Surface*days
	GND	Driftnets			
	GNC	Encircling gillnets			
	GNF	Fixed gillnets (on stakes)			
	GTR	Trammel nets			
	GTN	Combined gillnets-trammel nets			
	GEN	Gillnets and entangling nets (not specified)			
	GN	Gillnets (not specified)			

Fishing gear class	Fishing gear		Unit of Capacity	Unit of Activity	Nominal Effort
Hooks and Lines	LHP	Handlines and pole-lines (hand operated)	Number of hooks; Number of longline unit	Fishing hours; Fishing days	Number of hooks*hours; Number of longlines units*days/hours
	LHM	Handlines and pole-lines (mechanised)			
	LLS	Set longlines			
	LLD	Drifting longlines			
	LL	Longlines (not specified)			
	LTL	Trolling lines			
	LX	Hooks and lines (not specified)			

### Appendix H - Data Submission Calendar

DCRF Tasks	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<i>Task I - Catch</i>												
Landing data						X						
Catch data per species						X						
<i>Task II - By catch of vulnerable species</i>							X					
<i>Task III - Fleet</i>					X							
<i>Task IV - Effort</i>						X						
<i>Task V - Socio-economics</i>											X	
<i>Task VI - Biological information</i>												
Stock assessment form									X			
Length data							X					
Other biological data							X					
Dolphin fish							X					
Red coral						X						

## Appendix I - Shared stocks

English common name	Scientific name	Area	Countries
Dolphin fish	<i>Coryphaena hippurus</i>	Western Mediterranean.	Italy, Malta, Spain and Tunisia
Horned octopus	<i>Eledone cirrhosa</i>	Adriatic Sea	Albania, Croatia, Italy and Serbia-Montenegro
Musky octopus	<i>Eledone moschata</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Anchovy	<i>Engraulis encrasicolus</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Anchovy	<i>Engraulis encrasicolus</i>	Aegean Sea	Greece and Turkey
Anchovy	<i>Engraulis encrasicolus</i>	Gulf of Lions	France and Spain
Shortfin mako	<i>Isurus oxyrinchus</i>	All Mediterranean	All countries
Porbeagle	<i>Lamna nasus</i>	All Mediterranean	All countries
European squid	<i>Loligo vulgaris</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Blackbellied angler	<i>Lophius budegassa</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Monkfish or angler	<i>Lophius piscatorius</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Hake	<i>Merluccius merluccius</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Hake	<i>Merluccius merluccius</i>	Gulf of Lions	France and Spain
Hake	<i>Merluccius merluccius</i>	North Tyrrhenian and Corsica	Italy and France
Hake	<i>Merluccius merluccius</i>	Sicily Channel	Italy, Tunisia, Libya and Malta
Blue whiting	<i>Micromesistius poutassou</i>	Adriatic Sea	Albania, Croatia, Italy and Serbia-Montenegro
Blue whiting	<i>Micromesistius poutassou</i>	North Tyrrhenian and Corsica	Italy and France
Red mullet	<i>Mullus barbatus</i>	Western Mediterranean	Corsica and Sardinia
Red mullet	<i>Mullus barbatus</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Striped red mullet	<i>Mullus surmuletus</i>	Western Mediterranean	Corsica and Sardinia
Norway lobster	<i>Nephrops norvegicus</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Norway lobster	<i>Nephrops norvegicus</i>	North Tyrrhenian and Corsica	Italy and France
Black spot seabream	<i>Pagellus bogaraveo</i>	Alboran Sea and the Straits of Gibraltar	Spain and Morocco
Common pandora	<i>Pagellus erythrinus</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Common spiny lobster	<i>Palinurus elephas</i>	Western Mediterranean	Corsica and Sardinia
Common spiny lobster	<i>Palinurus elephas</i>	Sicily channel	Tunisia and Italy
Pink spiny lobster	<i>Palinurus mauritanicus</i>	Sicily channel	Tunisia and Italy
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Adriatic Sea	Albania, Croatia, Italy and Serbia-Montenegro
Blue shark	<i>Prionace glauca</i>	All Mediterranean	All countries
Sardine	<i>Sardina pilchardus</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro



English common name	Scientific name	Area	Countries
Sardine	<i>Sardina pilchardus</i>	Aegean Sea	Greece and Turkey
Atlantic mackerel	<i>Scomber scomber</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Common cuttlefish	<i>Sepia officinalis</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Common sole	<i>Solea vulgaris</i>	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia-Montenegro
Sprat	<i>Sprattus sprattus</i>	Adriatic Sea	Croatia, Italy, Slovenia
Albacore	<i>Thunnus alalunga</i>	All Mediterranean	All countries
Bluefin tuna	<i>Thunnus thynnus</i>	All Mediterranean	All countries
Swordfish	<i>Xiphias gladius</i>	All Mediterranean	All countries

SAC provisional shared stocks list / Liste provisoire des stocks partagés du CSC (Rome, 2006) (Appendix H - Report of the ninth session of the Scientific Advisory Committee of the GFCM, Rome, Italy, 24–27 October 2006)

### Acronyms

- DCRF Data Collection Reference Framework
- FAO United Nations Food and Agriculture Organization
- FMSY Fishing Mortality Rate of Maximum Sustainable Yield
- GFCM General Fisheries Commission for the Mediterranean
- GSA Geographical Sub Area
- ICES International Council for the Exploration of the Sea
- IUCN World Conservation Union (International Union for the Protection of Nature)
- MPA Marine Protected Area
- MSY Maximum Sustainable Yield
- RFMO Regional Fisheries Management Organization
- SAC Scientific Advisory Committee
- SC Subcommittee
- TAC Total Allowable Catch

## References

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Recommendation GFCM/36/2012/1 on further measures for the exploitation of red coral in the GFCM area.

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Recommendation CM-GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area.

Resolution GFCM/35/2011/1 on the submission of combined data on fishing vessels.

Recommendation GFCM/33/2009/8 on the establishment of a list of vessels presumed to have carried out IUU fishing in the GFCM area repealing recommendation GFCM/2006/4.

Recommendation MCS-GFCM/33/2009/7 concerning minimum standards for the establishment of a Vessel Monitoring System (VMS) in the GFCM area.

Recommendation MCS-GFCM/33/2009/6 concerning the establishment of a GFCM record of vessels over 15 metres authorized to operate in the GFCM area amending the recommendation GFCM/29/2005/2.

Recommendation DIR-GFCM/33/2009/5 on the establishment of the GFCM regional fleet register.

Recommendation GFCM/33/2009/3 on the implementation of the GFCM task 1 statistical matrix and repealing resolution GFCM/31/2007/1.

Recommendation CM-GFCM/33/2009/2 on the minimum mesh size in the codend of demersal trawl nets.

Recommendation CM-GFCM/33/2009/1 on the establishment of a Fisheries Restricted Area in the Gulf of Lions to protect spawning aggregations and deep sea sensitive habitats.

Recommendation MCS-GFCM/32/2008/1 Regional scheme on port state measures to combat illegal, unreported and unregulated fishing activities in the GFCM area.

Recommendations GFCM/30/2006/3 Establishment of a closed season for the dolphin fish fisheries using fishing aggregation devices (FADs).

Recommendation CM-GFCM/30/2006/2 Establishment of a closed season for the dolphin fish fisheries using Fishing Aggregation Devices (FADs).