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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 was endorsed by the 16th Session of the GFCM Scientific Advisory Committee (SAC) (17-21 March 2014) and encompasses the technical inputs gathered at the 2014 sessions of the Subcommittees of the 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 decisionmaking 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 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

<sup>&</sup>lt;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: <u>ftp://ftp.fao.org/docrep/fao/meeting/011/j8995e.pdf</u>).

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

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

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 <u>internal assessment</u> 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 <u>external assessment</u>, 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 Back Sea countries and at providing the basis for the development of a future regional cooperation programme on fisheries.

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

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

<sup>&</sup>lt;sup>5</sup> <u>http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM\_XXXVII\_2013\_Inf.12.pdf</u>

<sup>&</sup>lt;sup>6</sup> http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM\_XXXVII\_2013\_Inf.11.pdf

<sup>&</sup>lt;sup>7</sup> http://151.1.154.86/GfcmWebSite/GFCM/37/GFCM XXXVII 2013 Inf.10.pdf

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

- 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.

<sup>&</sup>lt;sup>8</sup> <u>http://www.gfcm.org/gfcm/topic/16165/en</u>

<sup>&</sup>lt;sup>9</sup> <u>http://www.gfcm.org/gfcm/topic/16086/en</u>

#### 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.

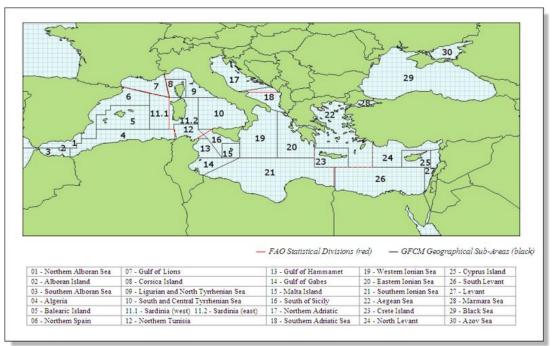


Figure 1: Map of the GFCM Geographical subareas (GSAs) (Res. GFCM/33/2009/2)

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.

GFCM-DCRF TASKS (T)			SOURCES <sup>10</sup>		
ID	TASK	SUBTASKS	GFCM DECISIONS	OTHER	
T. I	САТСИ	A) Landing data	Yes	(SAC national reports)	
1.1	CATCH	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	-	
<b>T. V</b>	SOCIO- ECONOMICS	-	Yes	(ad hoc questionnaires)	
	BIOLOGICAL INFORMATION	A) Stock assessment	Yes	(Stock assessment forms)	
		B) Length data	Yes	-	
T. VI		C) Other biological data	No	-	
		D) Dolphin fish	Yes	-	
		E) Red coral	Yes	(ad hoc questionnaires)	

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

<sup>&</sup>lt;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:

	Task
-	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).

	DCRF TASKS	( <b>T</b> )	DATA	PURPOSES	CURRENT DATA
ID	TASK	SUB-TASK	DAIA	FURFOSES	REQUIREMENTS
T. I	САТСН	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> <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>
	0.1101	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	– Rec. GFCM/33/2009/3
Т. П	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.	Quantification incidental catches of vulnerable species and assessment on the impact of fisheries on species of conservation concern.	<ul> <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> <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. GFCM33/2009/1</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.	Accounting for the amount of effort deployed and to evaluate fishing pressure and trends in CPUE.	– Rec. GFCM/33/2009/3
<b>T. V</b>	SOCIO- ECONOMICS	-	Data related to economic and social variables of the fishery by country, area and fleet segment.	Assessing the economic value and social implications of the fisheries.	– Rec. GFCM/33/2009/3

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	DCRF TASKS	( <b>T</b> )	DATA	PURPOSES	CURRENT DATA
ID	TASK	SUB-TASK	DAIA	FUNFOSES	REQUIREMENTS
		VI.1) Stock assessment	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.	Assessing the status of stocks and provision of scientific advice.	– Rec. GFCM/33/2009/3
	BIOLOCICAL	VI.2) Length data	Data related to the observed size distribution of the catch (landing and discards), by identified priority species per area and fleet segment.	), by I fleet Monitoring the structure of populations. y and s), by Monitoring the biological rates and the	– Rec. GFCM/33/2009/3
T. VI	BIOLOGICAL INFORMATION	VI.3) Other biological data	Biological variables (i.e. sex, maturity and age) of the catch (landing and discards), by identified priority species per area and fleet segment		– Rec. GFCM/33/2009/3
		VI.4) Dolphin fish	Annual data on the total landing, the fishing period and the area of fishing operations regarding the dolphin fish <i>Coryphaena hyppurus</i> .	Monitoring the population status of the dolphin fish and assessing the effect of the seasonal closure on the fishery.	– Rec. GFCM/30/2006/2
		VI.5) Red Coral	Information on red coral harvesting: management measures at national level, catches, effort and biological parameters.	Assessing the current status and regulating the exploitation of red coral.	<ul> <li>Rec. GFCM/35/2011/2</li> <li>Rec. GFCM/36/2012/1</li> </ul>

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, midwater 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).

FIELDS
Country
Reference year
GSA
Fleet segment
Number of vessels
Total landing (tonnes)

# Table I.1.1 - Landing dataMandatory data

**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).

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

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

**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).

FIELDS
Country
Reference year
GSA

 Table II.1 - Vulnerable species

 Mandatory data for species listed in Appendix E

FIELDS
Group of vulnerable species
Family
Species
Fleet segment
Fishing Gear
Total number of individuals caught
Number of individuals released alive
Number of dead individuals
Number of released in unknown status

**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

FIELDS
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

FIELDS
Country
Reference year
Date
Registration authority
Vessel name (if any)
Vessel register number
IMO registration 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

FIELDS
Country
Reference year
Date

FIELDS
Registration authority
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.

FIELDS
Country
Reference year
Date
Registration authority
Vessel name (if any)
Vessel register 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 transhipping
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)

 Table III.4 - Fishing vessel statistics

 Optional data

**Frequency and deadline of transmission** – Countries should submit the requested data, at least for the reference year n-1 by  $31^{st}$  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>&</sup>lt;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 (Appendix A –Priority species). 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 –Priority species). CPUE data should be reported by fishing gear and established nominal effort. Mandatory fishing effort measurements are described in Appendix F.

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

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

FIELDS
Country
Reference year
GSA
Fishing Gear
Species
CPUE
Nominal effort

Table IV.2 - CPUEMandatory data for species Group 1 and Group 2

**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.

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

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

**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.

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

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

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

FIELDS
Country
Reference year
GSA
Fleet segment
Number of vessels
Personnel costs
Fuel consumption
Fuel price
Repair and maintenance costs

FIELDS
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)

FIELDS
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 socioeconomic 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)

FIELDS
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 he 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

<sup>&</sup>lt;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 (Appendix A - Priority Species) should 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.

FIELDS
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 some from a sampling program

### Table VI.2.1 – Length data

Mandatory data for species Group 1, Group 2 and Group 3

\* *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

FIELDS
Country
Reference year
GSA
Source of data
Fleet segment

FIELDS	
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 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.

FIELDS
Country
Reference year
GSA
Source of data
Fleet segment
Fishing gear

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

FIELDS
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

FIELDS
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 hyppurus*). 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).

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

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

**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

FIELDS		
Country		
Reference year		
GSAs of fishing operation		
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		
Total number of FADs		
Total number of fishing trips		
Number of FADs targeted per fishing trip		
Average size of fish caught (at the beginning and at the end of the season)		
Total transhipments		
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 resource 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 (branch diameter measured at 1 cm above their base) and different management schemes in force are mandatory (Tables VI.5.1 and VI.5.2).

FIELDS				
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?				
Designated ports for landing red coral				

## Table VI.5.1 - Red coral (management) Mandatory data

FIELDS				
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

Fields				
Reference year				
Country				
Reporting authority / institution				
GFCM geographical area (GSA)				
Statistical grid				
Area (name)				
Size of the area (approx. in $m^2$ )				
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)** – Data requested in Table VI.5.3 refers to biological information on population density, growth and mortality rates, population size and age structure, reproductive features and recruitment rates. These biological parameters are not easily available for most fishing areas unless specific research projects are in place, therefore those fields remain optional and must be transmitted only if available).

Fields					
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:					

## Table VI.5.3 - Red coral (biology)

Optional data

**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 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  $15\%^{13}$  of the total subregion landings;
- 3) the landings by weight of the species is less than  $500^9$  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 elasmobranches species (G3). It aims at improving the knowledge especially for some of the elasmobranches 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. Countries are kindly invited to provide this information also for species of G2 and G3 should it be available.

<sup>&</sup>lt;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.

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

\* 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.

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

**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.

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

\* 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)

Vessel groups*		Length classes (LOA)				
		< 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	
	Р	Small-scale vessels with engine	P-05	P-06	P-07	P-08
	Polyvalent vessels	P-09	P-10	P-11	P-12	
Sainana	Seiners S	Purse seiners	S-01	S-02	S-03	S-04
Semers		Tuna seiners	S-05	S-06	S-07	S-08
Dredgers	D	Dredgers	D-01	D-02	D-03	D-04
Trawlers <b>T</b>	Beam trawlers	T-01	T-02	T-03	T-04	
	Т	Pelagic trawlers	T-05	T-06	T-07	T-08
		Trawlers	T-09	T-10	T-11	T-12
Long liners	L	Long liners	L-01	L-02	L-03	L-04

Appendix B - Fleet segments (combination of vessel group and length classes)

\* 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

Name of the FRA	Country	GSA	km <sup>2</sup>
<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 C - Fisher	ies restricted	areas (F	'RAs)
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Class	Code	Name
	LA	Without purse lines (lampara)
Sumounding Note	PS	With purse lines (purse seines)
Surrounding Nets	PS1	One boat operated purse seines
	PS2	Two boats operated purse seines
	SB	Beach seines
	SDN	Danish seines
Saina Nata	SPR	Pair seines
Seine Nets	SSC	Scottish seines
	SV	Boat or vessel seines
	SX	Seine nets (not specified)
	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
Troub	PTM	Midwater pair trawls
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)
Dradaas	DRB	Boat dredges
Dredges	DRH	Hand dredges
	LN	Lift nets (not specified)
L :ft Nata	LNB	Boat-operated lift nets
Lift Nets	LNP	Portable lift nets
	LNS	Shore-operated stationary lift nets
	FCN	Cast nets
Falling Gear	FG	Falling gear (not specified)
	GEN	Gillnets and entantling nets (not specified)
	GN	Gillnets (not specified)
	GNC	Encircling gillnets
	GND	Driftnets
Gillnets and Entangling Nets	GNF	Fixed gillnets (on stakes)
	GNS	Set gillnets (anchored)
	GTN	Combined gillnets-trammel nets
	GTR	Trammel nets

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

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

Class	Code	Name
	FAR	Aerial traps
	FIX	Traps (not specified)
	FPN	Stationary uncovered pound nets
Traps	FPO	Pots
	FSN	Stow nets
	FWR	Barrier, fences, weirs, etc
	FYK	Fyke nets
	LHM	Handlines and pole-lines (mechanised)
	LHP	Handlines and pole-lines (hand operated)
	LL	Longlines (not specified)
Hooks and Lines	LLD	Drifting longlines
	LLS	Set longlines
	LTL	Trolling lines
	LX	Hooks and lines (not specified)
Grappling and Wounding	HAR	Harpoons
Grapping and wounding	HMP	Pumps
Hanvasting Mashings	HMD	Mechanised dredges
Harvesting Machines	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	
		Balaenoptera acutorostrata	Common minke whale	
	Balaenopteridae –	Balaenoptera borealis	Sei whale	
	Daraenopterituae	Balaenoptera physalus	Fin whale	
		Megaptera novaeangliae	Humpback whale	
	Balenidae	Eubalaena glacialis	North Atlantic right whale	
	Physeteridae	Physeter macrocephalus	Sperm whale	
	Filysetenuae	Kogia simus	Dwarf Sperm Whale	
	Phocoenidae	Phocoena phocoena	Harbor porpoise	
Cetaceans		Steno bredanensis	Rough-toothed dolphin	
Cetaceans		Grampus griseus	Risso's dolphin	
		Tursiops truncatus	Common bottlenose dolphin	
	Delahinidee	Stenella coeruleoalba	Striped dolphin	
	Delphinidae	Delphinus delphis	Common dolphin	
		Pseudorca crassidens	False killer whale	
		Globicephala melas	Long-finned pilot whale	
		Orcinus orca	Killer whale	
		Ziphius cavirostris	Cuvier's beaked whale	
	Ziphiidae	Mesoplodon densirostris	Blainville's beaked whale	
Seals	Phocidae	Monachus monachus	Mediterranean monk seal	
Seals	Phochdae	Monacnus monacnus	Mediterranean monk sear	
		Carcharias taurus	Sand tiger	
	Carcharhinidae	Carcharodon carcharias	Great white shark	
		Prionace glauca	Blue shark	
Sharks, Rays, Chimaeras*	Cetorhinidae	Cetorhinus maximus	Basking shark	
	Gymnuridae	Gymnura altavela	Spiny butterfly ray	
		Isurus oxyrinchus	Shortfin mako	
	Lamnidae	Lamna nasus	Porbeagle	
	Myliobatidae	Mobula mobular	Devil fish	
	Odontaspididae	Odontaspis ferox	Small-tooth sand tiger shark	

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

Group of vulnerable species	Family	Species	Common name
		Larus melanocephalus	Mediterranean Gull
	Pandionidae	Pandion haliaetus	Osprey
	Pelecanidae	Pelecanus crispus	Dalmatian Pelican
	relecalituae	Pelecanus onocrotalus	Great White Pelican
	Phalacrocoracidae	Phalacrocorax aristotelis	European Shag
	Filalaciocoracidae	Phalacrocorax pygmaeus	Pygmy Cormorant
	Phoenicopteridae	Phoenicopterus ruber	American Flamingo
Sea birds		Calonectris diomedea	Cory's Shearwater
	Procellariidae	Puffinus puffinus yelkouan	Yelkouan Shearwater
	Flocenanidae	Puffinus yelkouan	Mediterranean Shearwater
		Puffinus muretanicus	Balearic Shearwater
	Scolopacidae	Numenius tenuirostris	Slender-billed Curlew
		Sterna albifrons	Little Tern
		Sterna bengalensis	Lesser Crested Tern
	Sternidae	Sterna sandvicensis	Sandwich Tern
		Sterna caspia	Caspian Tern
		Sterna nilotica	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	
	PS	With purse lines (purse seines)				
Surrounding Nets	PS1	One boat operated purse seines	GT	Fishing sets	GT*fishing sets	
Suffounding Nets	PS2	Two boats operated purse seines	UI	Fishing sets	OT Itshing sets	
	LA	Without purse lines (lampara)				
	SB	Beach seines				
	SV	Boat or vessel seines				
Seine Nets	SDN	Danish seines	Net length and	Fishing days	Net length and drop*Fishing	
Seme Nets	SSC	Scottish seines	drop	Fishing days	days	
	SPR	Pair seines				
	SX	Seine nets (not specified)				
	TB	Bottom trawls				
	TBB	Bottom beam trawls				
	OTB	Bottom otter trawls				
	PTB	Bottom pair trawls				
	TBN	Bottom nephrops trawls		Fishing days		
	TBS	Bottom shrimp trawls				
Trawls	TM	Midwater trawls	GT		GT*Fishing days	
Tiawis	OTM	Midwater otter trawls	01	Tishing days	OT TISHING days	
	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				
	DRB	Boat dredges	GT	Fishing days	GT*Fishing days	
Harvesting Machines	HMD	Mechanised dredges				

Fishing gear class	Fishing gear		Unit of Capacity	Unit of Activity	Nominal Effort	
	GNS Set gillnets (anchored)					
	GND	Driftnets				
	GNC	Encircling gillnets				
Gillnets and Entangling Nets	GNF	Fixed gillnets (on stakes)	Net length and	Fishing days	Net length*Fishing days	
Offinets and Entanging Nets	GTR	Trammel nets	drop	Tishing days	Net length Tishing days	
	GTN	Combined gillnets-trammel nets				
	GEN	Gillnets and entangling nets (not specified)				
	GN	Gillnets (not specified)				
	FPN	Stationary uncovered pound nets				
	FPO	Pots		Fishing days	Number of traps/pots*Fishing	
	FYK	Fyke nets	Number of traps/pots			
Traps	FSN	Stow nets				
	FWR	Barrier, fences, weirs, etc			days	
	FAR	Aerial traps				
	FIX	Traps (not specified)				
	LHP	Handlines and pole-lines (hand operated)				
	LHM	Handlines and pole-lines (mechanised)				
	LLS	Set longlines				
Hooks and Lines	LLD Drifting longlines		Number of hooks	Fishing days	Number of hooks*Fishing days	
	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	
	PS	With purse lines (purse seines)				
Surrounding Nets	PS1	One boat operated purse seines	Length and drop of the	Fishing sets	Length of the nets*fishing	
Surrounding Nets	PS2	Two boats operated purse seines	net	Fishing sets	sets	
	LA	Without purse lines (lampara)				
	TB	Bottom trawls				
	TBB	Bottom beam trawls				
	OTB	Bottom otter trawls				
	PTB	Bottom pair trawls				
	TBN	Bottom nephrops trawls				
	TBS	Bottom shrimp trawls			GT*Fishing hours;	
Trawls	TM	Midwater trawls	GT; kW	Fishing hours; Fishing		
114W15	OTM	Midwater otter trawls	01, KW	days	kW*Fishing days	
	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)				
	GNS	Set gillnets (anchored)				
	GND	Driftnets				
	GNC	Encircling gillnets				
Gillnets and Entangling	GNF	Fixed gillnets (on stakes)	-			
Nets	GTR	Trammel nets	Net length and drop	Fishing days	Surface*days	
	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	
	LHP	Handlines and pole-lines (hand operated)				
	LHM	Handlines and pole-lines (mechanised)	Number of boolses	Fishing hours; Fishing days	Number of boolse*bourse	
Hooks and Lines	LLS	Set longlines	Number of hooks; Number of longline unit		Number of hooks*hours; Number of longlines units*days/hours	
HOOKS and Lines	LLD	Drifting longlines				
	LL	Longlines (not specified)			units days/nours	
	LTL	Trolling lines				
	LX	Hooks and lines (not specified)				

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

### Appendix I - Shared stocks

English common name	Scientific name	Area	Countries
Dolphin fish	Coryphaena hippurus	Western Mediterranean.	Italy, Malta, Spain and Tunisia
Horned octopus	Eledone cirrhosa	Adriatic Sea	Albania, Croatia, Italy and SerbiaMontenegro
Musky octopus	Eledone moschata	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Anchovy	Engraulis encrasicolus	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Anchovy	Engraulis encrasicolus	Aegean Sea	Greece and Turkey
Anchovy	Engraulis encrasicolus	Gulf of Lions	France and Spain
Shortfin mako	Isurus oxyrhinchus	All Mediterranean	All countries
Porbeagle	Lamna nassus	All Mediterranean	All countries
European squid	Loligo vulgaris	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Blackbellied angler	Lophius budegassa	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Monkfish or angler	Lophius piscatorius	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Hake	Merluccius merluccius	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Hake	Merluccius merluccius	Gulf of Lions	France and Spain
Hake	Merluccius merluccius	North Tyrrhenian and Corsica	Italy and France
Hake	Merluccius merluccius	Sicily Channel	Italy, Tunisia, Libya and Malta
Blue whiting	Micromesistius poutassou	Adriatic Sea	Albania, Croatia, Italy and Serbia-Montenegro
Blue whiting	Micromesistius poutassou	North Tyrrhenian and Corsica	Italy and France
Red mullet	Mullus barbatus	Western Mediterranean	Corsica and Sardinia
Red mullet	Mullus barbatus	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Striped red mullet	Mullus surmuletus	Western Mediterranean	Corsica and Sardinia
Norway lobster	Nephrops norvegicus	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Norway lobster	Nephrops norvegicus	North Tyrrhenian and Corsica	Italy and France

English common name	Scientific name	Area	Countries
Black spot seabream	Pagellus bogaraveo	Alboran Sea and the Straits of Gibraltar	Spain and Morocco
Common pandora	Pagellus erythrinus	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Common spiny lobster	Palinurus elephas	Western Mediterranean	Corsica and Sardinia
Common spiny lobster	Palinurus elephas	Sicily channel	Tunisia and Italy
Pink spiny lobster	Palinurus. mauritanicus	Sicily channel	Tunisia and Italy
Deepwater rose shrimp	Parapenaeus longirostris	Adriatic Sea	Albania, Croatia, Italy and Serbia-Montenegro
Blue shark	Prionace glauca	All Mediterranean	All countries
Sardine	Sardina pilchardus	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Sardine	Sardina pilchardus	Aegean Sea	Greece and Turkey
Atlantic mackerel	Scomber scomber	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Common cuttlefish	Sepia officinalis	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Common sole	Solea vulgaris	Adriatic Sea	Albania, Croatia, Italy, Slovenia and Serbia- Montenegro
Sprat	Sprattus sprattus	Adriatic Sea	Croatia, Italy, Slovenia
Albacore	Thunnus alalunga	All Mediterranean	All countries
Bluefin tuna	Thunnus thynnus	All Mediterranean	All countries
Swordfish	Xiphias gladius	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

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Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area.

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

Resolution GFCM/35/2011/10n 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 GFCM/33/2009/7 concerning minimum standards for the establishment of a Vessel Monitoring System (VMS) in the GFCM area.

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

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

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