

GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN COMMISSION GÉNÉRALE DES PÊCHES POUR LA MÉDITERRANÉE



Proposal for the

GFCM DATA COLLECTION REFERENCE FRAMEWORK

DCRF

by GFCM Secretariat

DRAFT VERSION BEFORE EDITING (24th January 2014)

Available only in English

PREPARATION OF THIS DOCUMENT

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

This document is meant for consideration of the 2014 sessions of the GFCM SAC-Sub-Committees (3-5 February, Montenegro). The DCRF proposal is composed by two chapters and ten annexes which must be considered as part of the proposal itself.

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

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JUSTIFICATION OF THE DOCUMENT

As a concrete response to the need of strengthening the GFCM framework for the collection and processing of data on fisheries, the present document is a proposal for a new Data Collection Reference Framework (DCRF) in the GFCM area of convention.

The DCRF aims at being instrumental to achieve a more efficient data collection programme at sub-regional level and a better integration between data collection and the implementation of sub-regional multiannual management plans. It encompasses all the necessary indications for the collection of fisheries data by GFCM members in a standardized way thus providing the GFCM with an exhaustive set of data in support of the decision-making process for fisheries management both at region and at sub-regional level.

This proposal is the result of a series of actions set within the work page 2 on data collection of the GFCM Framework Programme (FWP), a platform designed to make the GFCM more functional through the consideration of key issues identified by the Task Force established by the Commission within the process of modernization of GFCM in 2011.

With the aim of fulfilling the GFCM objectives, the DCRF would empower the Commission in its decision-making process through a stronger scientific basis.

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 the basic texts of GFCM (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,
 - 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, the acquisition of reliable and representative data on the different elements of the fishery system is of paramount importance. The Secretariat is entitled to create the appropriate tools to facilitate the systematic transmission of this data by Members in the most possible standardized way, to store, manage and make them available for the subsequent analysis by the different scientific bodies.

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

Performance review and modernization of 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 Fisheries¹ 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)², to undertake such a review and endorsed, at its next Session in 2009, guidelines and criteria to conduct it³. An approach was suggested for the assessment of the GFCM Agreement and the extent to which measures adopted by the GFCM had achieved the objectives of the Commission and under relevant international instruments.

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

- modernisation of the GFCM Agreement and relevant Rules of Procedure;
- strengthening of the subsidiary bodies objectives and mandates;

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

² See GFCM Report of the 32nd Session (Rome, 25-29 February 2008), p.10, available at: ftp://ftp.fao.org/docrep/fao/010/i0162e/i0162e00.pdf.

³ See GFCM Report of the 33rd Session (Tunis, 23-27 March 2009), p. 118, available at: http://151.1.154.86/GfcmWebSite/docs/Reports/GFCM33e.pdf.

- enhancement of the compliance and enforcement mechanisms;
- updating of the 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 at this Session, the Commission agreed to build upon the strengths and make up for the weaknesses identified by the GFCM Performance review by establishing a Task Force. In line with the recommendations of the GFCM Performance review, the Task Force proposed to address a number of specific issues on various subject such as fisheries conservation and management, aquaculture, compliance and enforcement, financial and administrative aspects, decision-making, dispute settlement, international cooperation and interaction with Non-Members.

Framework programme (FWP)

In order to make progress on those issues under the consideration of the Task Force, a Framework Programme (FWP) was envisioned to make the GFCM more functional in anticipation of the amendment of the GFCM Agreement. The preliminary phase of the FWP was launched in July 2012 following the first validation meeting of the Task Force which recommended the establishment of a platform promoting sustainable development and cooperation in the Mediterranean and the Black Sea through multi-annual and multi-donor arrangements. The FWP also aims at strengthening intra-institutional coordination with the FAO Regional Projects and other inter-governmental organizations in matters relating to marine capture fisheries and aquaculture at regional level. To this end, within the FWP five work programmes (WP) were foreseen: 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 the WP02 (Data collection) is expected to be a more efficient data collection programme at a sub-regional level and a better integration between data collection and the implementation of sub-regional multiannual management plans.

To attain these objectives, a series of coordinated actions on strengthening the GFCM framework for the collection and processing of data on fisheries were carried out. In particular an assessment of data compliance, databases and data transmission protocols (internal assessment) was performed as well as an assessment of national data collection systems including compliance, collection process, processing, submission process and quality assessment (external assessment).

The <u>internal assessment</u> was 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 were evaluated:

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>, in collaboration with the National Focal Points⁴ through the use of online questionnaire, the different national data programmes were evaluated and possible gaps and way of improvement were identified. 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 formulation of a future regional collaborative programme on fisheries.

In order to analyze the results of this two assessments (internal and external), and to receive feedback directly from the Countries, the following 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.
- "Sub-regional meeting on data collection for Western, Central and Eastern Mediterranean", Frascati (Italy) from 25 to 27 March.
- "Workshop on fisheries data collection in the Black Sea", Varna (Bulgaria) from 22-23 April.

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

GAPS

- Contents of the current databases manage by the Secretariat are not enough to fulfill GFCM objectives.
- Although most countries have data collection programs in place, most of the requested information is not provided to the GFCM.

DIFFICULTIES

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

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⁴ Appointed by national authorities of each GFCM member

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 of the submission of data to GFCM should be revised.
- The Secretariat should send reminders to the countries about data and information requirements on a regular basis prior to the deadlines.
- The Secretariat should send summary reports about the status of transmitted data once the data sets have been received and processed by the Secretariat.
- The data transmission tools should be improved.
- National Focal Points should be maintained on the long term in the countries, in order to improve the communication flow with the Secretariat.

SPECIFIC PROPOSALS FOR TASK 1

- Reporting aggregation level should be revised to make it easier to report basic data such as catch and effort
- Task 1 could be divided in different modules that should be submitted in a staggered way.
- 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 on the information really useful for stock assessment.
- Species for which data are required should be prioritized at Regional level on the basis of criteria such as the importance in terms of catch, economical and/or ecological value.

On the basis of these outputs, considering the outcomes of last years' GFCM events, including the sessions of the Scientific Advisory Committees (SAC) and Sub-Committees, analysing the GFCM binding decisions currently in force, taking into account other GFCM data source such as SAC national reports⁵, Stock assessment forms⁶ and ad hoc questionnaires, the idea to design the GFCM Data Collection Reference Framework (DCRF) for compatible data collection programs in the GFCM region\sub-regions took shape.

This document represents the first concrete proposal for the GFCM-DCRF aiming at overcoming the identified weaknesses and consolidating the recognized strengths of the current GFCM data collection scheme. It is intended to encompass all the necessary indications for the collection of fisheries data by the member countries in a standardized way and consequent transmission to the GFCM.

⁵ http://www.gfcm.org/gfcm/topic/16165/en

⁶ http://www.gfcm.org/gfcm/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 decision regarding the best utilisation of fisheries resources in the GFCM area of competence (Figure 1). The collection of data required to achieve an appropriate management of fisheries is crucial and therefore the best available information in terms of quality and completeness should be provided by Members.

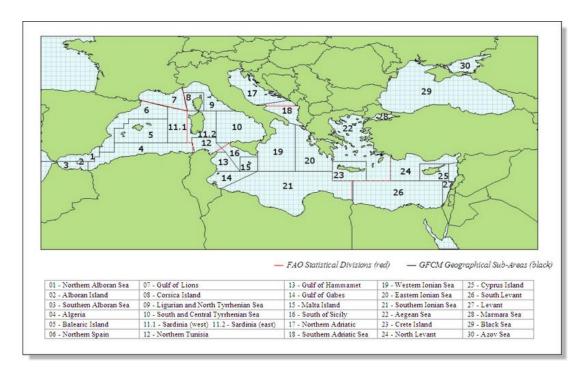


Figure 1: GFCM Geographical Sub-Areas (GSAs) map (Res. GFCM/33/2009/2)

The main objective of the Data Collection Reference Framework (DCRF) is to provide the GFCM with an exhaustive set of data in support of the decision-making process for fisheries management both at region and at sub-regional level.

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 and 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 calls for enhancement, with many of the received datasets being incomplete, hindering the capacity of the GFCM to properly exploit these data.

The present DCRF would be a cornerstone for the new institutional framework of the GFCM, as the Commission will be empowered in its decision-making process through a stronger scientific basis. The expected outcomes of the application of this framework will be a more efficient and harmonized data collection system, both at national and sub-regional level, allowing a better integration between data collection and the implementation of sub-regional multiannual management plans.

The rationale behind the design of this framework is to reduce all data requirements into a single document easy to understand with the necessary indications to the Members for the collection and transmission of data related to fisheries to GFCM. Moreover, the gathered information should be sufficient and reliable enough for scientists to review the status of the different resources, to assess the economic and social dimension of the fleets and to provide scientific advice for further recommendations.

Data collected within DCRF, in order to fulfil GFCM objectives, should include information by area, 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 level of detail for their timely submission, in 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 registered 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 per 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.

Specifically, the draft proposal of DCRF (see chapter II) is based on six different tasks:

Table 1 – Summary of Tasks and main sources

GFCM-DCRF TASKS (T)		SOURCES ⁷		
ID	TASK	SUB-TASKS	GFCM DECISIONS OTHER	
		A) Landing data	Yes	(SAC National report)
T. I	CATCH	B) Catch data per species	Yes	(Statlant 37A)
т. п	BY-CATCH OF VULNERABLE SPECIES	-	Yes	(Bibliographical reviews, Research projects, ad hoc questionnaires)
T. III	FLEET	-	Yes	(SAC National report, ad hoc questionnaires)
T. IV	EFFORT	-	Yes	-
T. V	SOCIO- ECONOMICS	-	Yes	(ad hoc questionnaires)
		A) Stock assessment	Yes	(Stock assessment forms)
	Protograti	B) Length data	Yes	-
T. VI	BIOLOGICAL INFORMATION	C) Other biological data	No	-
		D) Dolphin fish	Yes	-
		E) Red Coral	Yes	(ad hoc questionnaires)

 $^{^{7}}$ Sources from which data and information currently derive

Chapter 2 Tasks of the Data Collection Reference Framework

This chapter describes the basic fishery data, divided into the six identified Tasks of the DCRF, which are needed for an effective conservation and management of marine living resource in the Mediterranean and Black Sea area. Each task is briefly introduced with a short description, the countries concerned, the type of obligation of data (mandatory and/or optional), a table listing the variables requested as well as the deadline for the submission:

Task

- Description
- Countries involved
- Data (mandatory, optional)
- Deadline for data submission

A complementary technical document with the definition of each variables/data requested, and indication for their estimates will be further elaborated.

In order to get all the requested information, every year formal data calls will be launched by the GFCM Secretariat for each DCRF task. Full details of all the parameters, aggregation levels and transmission instructions will be indicated in the data calls. Members, through their identified National Focal Point for data collection, should transmit their data timely and by using dedicated electronic format provided by the Secretariat. The datasets gathered by Secretariat will be checked for compliance and quality before final upload in the related information systems. Data will be made available to experts participating to the GFCM scientific subsidiary bodies (e.g. Working Groups, Sub-Committee and SAC), according to the data confidentiality policy and procedures currently in force. 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 will liaise for correction if needed.

In designing its information systems to collect, validate, analyse and disseminate data, GFCM will continue paying particular attention to the use of international codifications and standards codes (e.g.: fishing gear, species, fishing areas, etc.) as well as to all the aspects related to data security and confidentiality (resolution GFCM/35/2011/).

In the long term, the DRCF will help countries to collect the minimum set of information required to assess the status of their fisheries. The data collected through the DRCF will provide the GFCM with the information required to manage Mediterranean and Black Sea fisheries in order to ensure the sustainability of the marine living resources both at Region and at sub regional level.

Requested data could be submitted according to the following Tasks of the DCRF (each block can be transmitted separately) and following the data submission calendar (Annex H).

 Table 2 - GFCM DCRF: summary of tasks and purposes

DCRF TASKS (T)		(T)	БАТА	DUDDOCEC	CURRENT DATA
ID	TASK	SUB-TASK	DATA	PURPOSES	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.	 Rec. GFCM/33/2009/3 Rec. GFCM/33/2009/7 Rec. GFCM/35/2011/2 Rec. GFCM/36/2012/1
		I.2) Catch data per species	Annual data on total catch (i.e. landing and discards) for 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.	Quantify incidental catches of vulnerable species and disseminate scientific information on the impact of fisheries on species of conservation concern.	 Rec. GFCM/35/2011/5 Rec. GFCM/36/2012/3 Rec. GFCM/35/2011/4 Rec. GFCM/36/2012/2
т. ш	FLEET	-	Register of fishing vessels with identification features (i.e. vessel name, registration number, port, 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	 Res. GFCM/35/2011/1 Rec. GFCM/33/2009/5 Rec. GFCM/33/2009/6 Rec. GFCM/33/2009/2 Rec. GFCM/33/2009/1 Rec. GFCM/33/2009/3 Rec. GFCM/30/2006/3
T. IV	EFFORT	-	Fishing effort data calculated as a combination of capacity and activity by country, area and fleet segment. 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.	- Rec. GFCM/33/2009/3
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 impact of the fisheries.	- Rec. GFCM/33/2009/3

DCRF TASKS (T)		(T)	DATA	PURPOSES	CURRENT DATA
ID	TASK	SUB-TASK	DATA	FURFUSES	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.	Assess the status of stocks and dissemination of scientific information for scientific advice.	- Rec. GFCM/33/2009/3
		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.	Monitoring the populations' structure	- 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	Monitoring the biological rate and the dynamics of the exploited species.	- 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> .	Monitor the population status of the dolphin fish	- Rec. GFCM/30/2006/2
		VI.5) Red Coral	Information on red coral colonies: management, harvest, effort and biological parameters.	Properly manage and regulate the exploitation of red coral at national and international level.	Rec. GFCM/35/2011/2Rec. GFCM/36/2012/1

For the purpose of this framework the following definitions shall be taken into consideration:

- GEAR GROUP: combination of a group of vessel using the same gear (e.g. dredgers, trawlers) or a combination of different gears (e.g. polyvalent), without taking in consideration the vessel length (length overall LOA) (Annex C).
- FLEET SEGMENT: combination of gear group and vessel length (Annex B). In order to define the fleet segments the GFCM classification already in force, have been used 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) (Annex 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 by-catch, 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 to another according to the size, market demand, season or other criteria, at the same time other species may be undesirable or of limited value in same sub-region but not in other.

2.1 Task I: CATCH

Sub task I.1 - Landing data

Description - The knowledge of the biomass removed from the ecosystem by fishing operations is fundamental to monitor the impact that fishing has on fish populations. This sub-task refers to the total amount of captures (i.e. landing). Total amount of landing, in weight, by fleet segment together with the number of vessel, should be reported by countries 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 tons) and number of vessels (Table I.1.1), are requested by fishing area (GSA) and fleet segment (Annex B).

Table I.1.1 - Landing data *Mandatory data*

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

Deadline for data submission - Countries should submit the requested data, pertaining to year n-1, by 30th June of each calendar year (n). Landing data (Table I.1.1) are mandatory (Annex H).

Sub task 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 estimations of the total nominal yearly catches including retained catch (landing) and catch discarded (discards). Discards could be compulsory only for some selected fleet segment (e.g. trawlers), which discards rate is assessed as significant and it could be sampled adequately every year. For some other fleet segment, the discarding level could be assessed as insignificant, and in this case there is no need to collect information on discards except when the species discarded are subject to compulsory reporting under GFCM instruments. Discard estimates can sometimes also be acquired 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 tons), including landing and discards, by commercial species, fleet segment (Annex B) and area (GSA) (Table I.2.1).

Table 1.2.1 - Catch data per species
Mandatory

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

Deadline for data submission - Countries should submit the requested data, pertaining to year n-1, by 30th June of each calendar year (n). Countries are encouraged to respect the above mentioned deadline and to provide all requested data (Annex H). Catch data per species (Table I.2.1) are mandatory.

2.2 Task II: BY-CATCH OF VULNERABLE SPECIES

Description - This section includes 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 the recommendation GFCM/36/2012/2, any incidental taking of sharks and rays of species included in Annex II and III (List of Endangered and Threatened Species) 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, so it is important to collate existing data and identify additional-alternative sources of information to guide ahead of 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 Annex E (Vulnerable species), a minimum set of parameters, such as number of specimens per fishing gear (Annex 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 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 speciesMandatory data for species listed in Annex E

FIELDS
Country
Reference year
GSA
Group of the vulnerable species
Species

FIELDS
Gear group
Fishing Gear
Number of individuals

Deadline for data submission - Countries should submit the requested data, pertaining to year before (year n-1), by 31st July of each calendar year (n) (Annex H).

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 thus providing reliable statistics on fishing capacity for management purposes, at regional and sub-regional level.

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

Data collected under this task will help to obtain:

- an accurate source of statistics for the Mediterranean and Black Sea fishing fleet;
- a complete picture of the regional, sub-regional, and national fishing capacity;
- a better knowledge, at regional/sub regional 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 of 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
Date
Registration authority
Vessel name (if any)
Vessel register number
Registration number
Operational status (Active Indicator)

FIELDS
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
VMS indicator (presence/absence)
Owner (details)

Table III.2 - Fleet (only for vessel over 15 meters)

Mandatory data

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

Moreover, countries whose vessels carry out fishing activity in any fisheries restricted areas (Annex L - Recommendations GFCM/30/2006/3 and GFCM/33/2009/1) have to properly report $ad\ hoc$ information (Table III.3).

Table III.3 - Fisheries Restricted AreasMandatory data

FIELDS
Country
Reference year
Date
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 different 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 StatisticsOptional data

FIELDS
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 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)

Deadline for data submission - Countries should submit the requested data, for the reference year n-1, by 31st March of each calendar year (n) (Annex H). Countries are encouraged to respect the above mentioned deadline and to provide all requested data. Tables III.1, III.2, and III.3 are mandatory. However, if collected, 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 and can be calculated through a combination of inputs, related to capacity, gear units and time. Effort information is needed to interpret changes in the amount of catch and are crucial information when designing 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) for which it

is active. Effort data can be obtained through various sources (log-books, sampling, census, port surveys, etc.).

Under this task should be also reported, only for the priority species of Group 1 and Group 2, the catch per unit of fishing effort (CPUE) which is an index of fishing efficiency both in terms of abundance and of economic value. In its basic form 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, effort information are requested in a standard way both per fishing capacity (e.g. GT, number of hooks) and activity (e.g. time fishing, number of trips). Requested information should be reported by GSA and fleet segment (Table IV.1). In order to establish reliable image of CPUE, countries are requested also to fulfil Table IV.2 for the identified species of Group 1 and Group 2 (Annex A - list of priority species). CPUE data should be reported by fishing gear and the established nominal effort. Mandatory fishing effort measurements are described in the Annex F.

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

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

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

FIELDS
Country
Reference year
GSA
Gear group
Fishing Gear
Species
CPUE
Nominal effort

Data (**Optional**) - Under this section, countries could report estimation of nominal effort based on other units of fishing capacity (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 Annex G.

Table IV.3 - Additional Fishing Effort MeasurementsOptional data

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

Deadline for data submission - Countries should submit the requested data, pertaining to year before (year n-1), by 30th June of each calendar year (n) (Annex H). Countries are encouraged to respect the above mentioned deadline and to provide all requested data.

2.5 Task V: SOCIO-ECONOMICS

Description - Objective of this task is to collect information in order to monitor the economic status of the fishing sector. Data collected under this task are needed to set up appropriate policy directions, especially in relation to promoting 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 for some variables even other data sources could be used (e.g. administrative records, auction sales, and census).

Data collected under this task will help to obtain:

- trends in production, in 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 the regional, sub-regional and national level of 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 are reported in Table V.1 and Table V.2. Data are requested by fishing area (GSA) and fleet segment (Annex B). Table V.1 includes data related to capacity, production and operative costs. Table V.2 requires reporting information on volume and value of landings by commercial species. Data on prices, income and costs should be reported in national currency.

Table V.1 - Economic and Social Data: aggregated information *Mandatory data*

FIELDS
Country
Reference year
GSA
Fleet segment
Capacity, GT
Capacity, Engine Power
Number of vessels
Total landing volume (Tons)
Total landings value
Total days at sea
Personnel costs
Fuel and oil costs
Repair and maintenance costs
Commercial costs
Other variable costs
Fixed costs
Employment
Currency

Table V.2 - Economic and Social Data: information by species

Mandatory data

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

Data (**Optional**) - Country are encouraged also to provide additional information regarding socio-economic aspects, such operating subsides, number of people involved in the crew roughly divided per different age, the investments in physical capital. The full list of optional data fields is summarized in the Table V.3.

Table V.3 - Economic and Social DataOptional data

FIELDS
Country
Reference year
GSA
Fleet segment
Operating subsidies
Investments in physical capital
Capital costs
Other income
Value of physical capital
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

Deadline for data submission – Country should submit the requested data, pertaining to the year before, within the 30th November (n-1) of each calendar year (n) (Annex H). Countries are encouraged to respect the above mentioned deadline and to provide all requested data.

2.6 Task VI: BIOLOGICAL INFORMATION

Sub task VI.1 - Stock assessment

Description - Regular fish stock assessments provide important information to assist fisheries managers with the figures necessary to make sound decisions for the management of fish stocks. Conservation and management measures should be based on best scientific advice produced by the GFCM dedicated body, the Scientific Advisory Committee (SAC). The main Task conferred to SAC is the evaluation of the status of (major) stocks exploited in the GFCM area. This task should be supported by timely provision by countries of relevant data concerning inputs (fleets, efforts) and outputs (catches, including discards). To ensure the highest quality stock assessments data used should be accurate and timely. To this purpose SAC 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 that require 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 through the "Stock assessment form".

Countries, participating in the fishery of the same stock, are encouraged to submit a single "stock assessment form". According to the SAC glossary, the shared stocks⁸ are the "stocks fished by two or more countries". The list of identified shared stocks is reported in Annex I (SAC October 2006 - GFCM, 2006).

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

Data (**Mandatory**) - Countries should communicate to GFCM Secretariat the name of the species/stock, the GSA, the year, the catches, the fishing gear plus 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. The Stock assessment form (http://www.gfcm.org/gfcm/topic/16086/en) describes all the requested information.

Deadline for data submission - Countries should submit the "Stock assessment form", pertaining to year before (n-1), by 30th September of each calendar year (n) (Annex H).

Sub task VI.2 - Length data

Description - Length data are the observed size distributions obtained from the fish measured under a given biological sampling plan. Scope of this sub-task is to investigate the length distribution in the catches (landings and discards) for the species reported in the different identified Groups (Group 1, 2 and 3) of priority species. The samples might be collected during fishery-independent surveys and/or be obtained from observers on board, and/or at landing place, and in any other fishery sampling programs. Length distribution should be reported by GSA and fleet segment. For sampling purposes, all the priority species Groups (Annex A- Priority Species), have to be considered.

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

Data (*Mandatory*) - For all the species selected in the Group 1, Group 2 and Group 3 (Annex A), a minimum set of parameters, including number of fish specimens per different length class by fleet segment (Annex B), should be reported (Table VI.2.1). Number of measured specimens, per each length classes, 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

FIELDS
Country
Reference year
GSA
Fleet segment
Species
Length

⁸ In the Mediterranean, despite the fact that the relevance of shared fishery resources is widely recognised, the list of priority shared fishery stocks would require a more deeper reading both in terms of consistency and homogeneity, as was discussed during the 31st session of the GFCM Commission (Rome, 2007).

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FIELDS
Number of individuals measured
Number of individuals expanded
Commercial or Discarded Fraction

Data (**Optional**) - Country are encouraged also to provide additional information regarding 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 the 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
Fleet segment
Species
L_{50}

Deadline for data submission - Countries should submit the requested data, pertaining to year before (year n-1), by 31st July of each calendar year (n) (Annex H). Length data (Table VI.2.1) are mandatory for all the species identified in the priority list of species (Annex 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 respect the above mentioned deadline and to provide all requested data.

Sub task VI.3 - Other biological data

Description - The objective of this sub-task is to collect information in order to monitor and to investigate the population dynamics of the main important species in the different subregion. The following variables, by fleet segment and for the Group 1 species identified and listed in Annex 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 be obtained from observers, on board and/or at landing place, and in any other fishery sampling programs. 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 the Group 1 (Annex A - Priority Species), have to be considered. Countries should communicate to GFCM Secretariat number of fish specimens measured by age, sex and maturity (Tables

VI.3.1 and VI.3.2) and per different fleet segment (Annex B). 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 dataMandatory data for species Group 1

FIELDS
Country
Reference year
GSA
Fleet segment
Species
Length
Age
Sex
Number of individuals measured
Number of individuals expanded
Commercial or Discarded Fraction

Table VI.3.2 - Maturity dataMandatory data for species Group 1

FIELDS
Country
Reference year
GSA
Fleet segment
Species
Length
Sex
Maturity
Number of individuals measured
Number of individuals expanded
Commercial or Discarded Fraction

Deadline for data submission - Countries should submit the requested data, pertaining to year before (year n-1), by 31st July of each calendar year (n) (Annex H). Data requested in Tables VI.3.1 and VI.3.2 are mandatory only for species identified in the Group 1 list (Annex A). Countries are encouraged to respect the above mentioned deadline and to provide all requested data.

Sub task VI.4 - Dolphin fish

Description - The objective of this task is to collect information related to the fishing activity of Dolphin fish (*Coryphaena hyppurus*). Dolphin fish is an epipelagic species inhabiting open waters, but also approaching the coast following ships and assembling 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 GFCM Secretariat the year, the fishing period, the GSAs of fishing operation, the total landing and the number of vessels involved (Table VI.4.1).

Table VI.4.1 - Dolphin fish *Mandatory data*

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

Data (**Optional**) - Country are encouraged also to provide additional information regarding some aspects related to the fishery of dolphin fish. This information, such operating subsides, number of people involved in the crew roughly divided per different age, the 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				
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 transhipments				
System of collection and treatment of catch and effort data				

Deadline for data submission - Countries should submit the requested data, pertaining to year before (n-1), by 31st July of each calendar year (n) (Annex 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.

Sub task VI.5 - Red coral

Description - Red coral (*Corallium rubrum*) in the Mediterranean has experienced a decrease in landings over the last 30 years and especially in shallow waters of some areas its

populations are close to depletion (Tsounis et al., 2007). At the request of its members, GFCM has engaged in several actions that have resulted in two Recommendations (GFCM/35/2011/2 and GFCM/36/2012/1) which request submission of data by Members operating this fishery.

Recommendation GFCM/35/2011/2 states that Member Countries should report catches and fishing effort by area and depths. Biological information coming 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.

The collection of data of this very valuable fishery both in terms of economic and ecological points of view under the present Framework is going to be the first standardized and systematic way of gathering primary information for the completion of a real picture of the status of this species. This is also the reason why the data requested need to be very comprehensive ranging from administrative issues to catches and growth.

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

Data (*Mandatory*) - Data on harvest, effort, location of banks, size of the 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

FIELDS				
Reference year				
Country				
Reporting Authority / Institution				
Reference to national/regional legislations				
How many areas have been identified?				
How many of them 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: provide 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 the harvest declared by divers?				

FIELDS				
Is the logbook mandatory?				
Is the harvest recorded by authorities?				
How is the minimum size controlled?				
Is there a programme of observers on board?				
Is there a programme of observers on landing site?				
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 authorised (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)				
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, if there is some sampling or research program 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

Fields
GFCM Geographical Area (GSA)
Statistical Grid
Bank (name)
Size of the bank (approx. in m2)
Lat
Long
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:

Deadline for data submission - 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 within the 31st June of each calendar year (n) (Annex H). If collected, Countries are invited to provide also data related to the biology of the red coral (Table VI.5.3).

Annex 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 in criteria relevant to the objectives of the Commission: development, conservation and management. On this regard, not only abundance but also the price and/or the market demand as well as ecological importance needs to be taken into account.

For the current proposal, priority species have been identified taking into account the criteria mentioned above, (i.e. abundance, economic value and conservation status) but also their importance in the different sub-regions have been considered. A ranking procedure, according to the species landings (abundance), has been also used for the correct classification of species in the list.

According to these criteria, for the purpose of the current proposal, 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 status* 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; species for which TACs quota have been defined.
- **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. This preliminary classification needs to be agreed upon during the current consultation phase including the current year Subcommittees meetings and SAC.

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 (Sub task VI.2 "Length data"). Only for the species selected in the Group 1 individual information on sex, age and maturity state should be also reported.

Species - Group 1

	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
Engraulis encrasicolus	X	X	X	X
Merluccius merluccius	X	X	X	
Mullus barbatus	X	X	X	
Mullus surmuletus	X	X	X	
Nephrops norvegicus	X	X		
Parapenaeus longirostris	X	X	X	
Psetta maxima				X
Sardina pilchardus	X	X	X	
Sprattus sprattus		_		X
Squalus acanthias				X
Trachurus mediterraneus				X

Species - Group 2

	Western Mediterranean	Central	Eastern Meditangan	Black Sea
	Algeria, France,	Mediterranean Albania, Croatia, Italy, Libia,	Mediterranean Cyprus, Egypt, Greece,	Bulgaria,
	Morocco, Spain	Malta, Montenegro, Slovenia, Tunisia	Lebanon, Syria, Israel, Turkey	Romania
Alosa pontica				X
Aristaeomorpha		X		
foliacea		71		
Aristeus antennatus	X			
Boops boops	X		X	<u> </u>
Chamelea gallina		X		<u> </u>
Coryphaena hippurus		X		
Diplodus annularis		X		
Eledone cirrhosa		X		
Eledone moschata		X		
Galeus melastomus		X		
Illex coindetii		X		
Lophius budegassa	X	X		
Merlangius				***
merlangius				X
Micromesistius	**			
poutassou	X			
Octopus vulgaris	X	X	X	
Pagellus bogaraveo	X			
Pagellus erythrinus		X		
Psetta maxima				
Raja asterias		X		
Raja clavata		X		
Sardinella aurita	X			
Scomber japonicus	X		X	
Scomber scombrus	X		_	
Sepia officinalis	X	X		
Solea vulgaris		X	X	
Sphyraena sphyraena		X		
Spicara smaris			X	
Sprattus sprattus				
Squilla mantis		X		
Trachurus		21		
mediterraneus	X		X	
Trachurus picturatus	X			
Tracinius piciniuus	41		X	

Species - Group 3

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

Annex B - Fleet segment

Vessels	Length classes (LOA)			
vessets	< 6 m	6 - 12 m	12-24 m	> 24 m
Polyvalent small-scale vessels without engine	X	X		
Polyvalent small-scale vessels with engine	X	X		
Trawlers		X	X	X
Purse Seiners	X	X	X	X
Long liners	X	X	X	X
Pelagic Trawlers			X	X
Tuna Seiners			X	X
Dredgers		X	X	
Polyvalent vessels			X	X
Beam trawlers	X	X	X	

Annex C - Gear group

Dredgers
Long liners
Polyvalent vessels with engine
Polyvalent vessels without engine
Purse Seiners
Trawlers
Tuna Seiners
Beam trawlers
Pelagic trawlers

Annex D - Fishing gear

PS	With purse lines (purse seines)
PS1	One boat operated purse seines
PS2	Two boats operated purse seines
LA	Without purse lines (lampara)
SB	Beach seines
SV	Boat or vessel seines
SDN	Danish seines
SSC	Scottish seines
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
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)
DRB	Boat dredges
DRH	Hand dredges
LNP	Portable lift nets
LNB	Boat-operated lift nets
LNS	Shore-operated stationary lift nets
LN	Lift nets (not specified)
FCN	Cast nets

FG	Falling gear (not specified)
GNS	Set gillnets (anchored)
GND	Driftnets
GNC	Encircling gillnets
GNF	Fixed gillnets (on stakes)
GTR	Trammel nets
GTN	Combined gillnets-trammel nets
GEN	Gillnets and entantling nets (not
GEN	specified)
GN	Gillnets (not specified)
FPN	Stationary uncovered pound nets
FPO	Pots
FYK	Fyke nets
FSN	Stow nets
FWR	Barrier, fences, weirs, etc
FAR	Aerial traps
FIX	Traps (not specified)
LHP	Handlines and pole-lines (hand operated)
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)
HAR	Harpoons
HMP	1
HMD	Mechanised dredges
HMX	Ų į
MIS	Miscellaneous gear
RG	Recreational fishing gear
NK	Gear not known or not specified

Annex E - Vulnerable species

Group of the vulnerable species	Family	Species	Common name		
		Balaenoptera acutorostrata	Common minke whale		
	Balaenidae	Balaenoptera musculus	Blue whale		
		Balaenoptera physalus	Fin whale		
	Physeteridae	Physeter macrocephalus	Sperm whale		
	Phocoenidae	Phocoena phocoena	Harbor porpoise		
		Steno bredanensis	Rough-toothed dolphin		
Cetaceans		Grampus griseus	Risso's dolphin		
Cetaceans		Tursiops truncatus	Common bottlenose dolphin		
	Delphinidae	Stenella coeruleoalba	Striped dolphin		
		Delphinus delphis	Common dolphin		
		Pseudorca crassidens	False killer whale		
		Globicephala melas	Long-finned pilot whale		
	Ziphiidae Ziphius cavirostris		Cuvier's beaked whale		
		others			
Seals	Phocidae	Monachus monachus	Mediterranean monk seal		
	G 1 1::1	Carcharias taurus	Sand tiger		
	Carcharhinidae	Carcharodon carcharias	Great white shark		
		Prionace glauca	Blue shark		
	Cetorhinidae	Cetorhinus maximus	Basking shark		
Sharks, Rays, Chimaeras*	Gymnuridae	Gymnura altavela	Spiny butterfly ray		
	Lamnidae	Isurus oxyrinchus	Shortfin mako		
	Lammae	Lamna nasus	Porbeagle		
	Myliobatidae	Mobula mobular	Devil fish		
	Odontaspididae	Odontaspis ferox	Small-tooth sand tiger shark		
	Oxynotidae	Oxynotus centrina	Angular rough shark		

Group of the vulnerable species	Family	Species	Common name	
•	Pristidae	Pristis pectinata	Smalltooth Sawfish	
	Pristidae	Pristis pristis	Common sawfish	
		Dipturus batis	Common skate	
	Doi:doo	Leucoraja circularis	Sandy ray	
	Rajidae	Leucoraja melitensis	Maltese skate	
		Rostroraja alba	Bottlenose skate	
	Rhinobatidae	Rhinobatos cemiculus	Blackchin guitarfish	
Sharks, Rays, Chimaeras*	Kiiiiobatidae	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	
	1		T 1 1 1	
G . T	CI 1 '' 1	Caretta caretta	Loggerhead turtle	
Sea Turtles	Cheloniidae	Chelonia mydas	Green turtle	
		Others		
	Falconidae	Falco eleonorae	Eleonora's Falcon	
	Cerylidae	Ceryle rudis	Pied Kingfisher	
		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	

Group of the vulnerable species	Family	Species	Common name	
		Larus genei	Slender-billed Gull	
		Larus melanocephalus	Mediterranean Gull	
	Pandionidae	Pandion haliaetus	Osprey	
	Pelecanidae	Pelecanus crispus	Dalmatian Pelican	
	Pelecallidae	Pelecanus onocrotalus	Great White Pelican	
	Phalacrocoracidae	Phalacrocorax aristotelis	European Shag	
	Pilalaciocofacidae	Phalacrocorax pygmaeus	Pygmy Cormorant	
	Phoenicopteridae	Phoenicopterus ruber	American Flamingo	
G 1. 1.		Calonectris diomedea	Cory's Shearwater	
Sea birds*	Procellariidae	Puffinus puffinus yelkouan	Yelkouan Shearwater	
	Procenanidae	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	

^{*} List of endangered or threatened species mentioned in the Annex II-III of the Barcelona Convention (Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean).

Annex F - Fishing Effort Measurement

Mandatory

Gear	Unit of Capacity	Unit of Activity	Nominal Effort
Dredge (for molluscs)	GT	Fishing days	GT*days
Trawl (including dredges for flatfishes)	GT	Fishing days	GT*days
Purse seine	GT	Fishing sets	GT*fishing sets
Nets	Net length and drop	Fishing days	Net length*days
Long lines	Number of hooks	Fishing days	Number of hooks*days
Traps	Number of traps	Fishing days	Number of traps*days
Purse seine/FADs	Number of FADs	Number of trips	Number of FADs*Number of trips

Annex G - Additional Fishing Effort Measurements

Optional

Gear	Unit of Capacity	Unit of Activity	Nominal Effort	
Trawl (including dredges for flatfishes)	redges for		GT*hours kW*days	
Purse seine	Length and drop of the net		Length of the nets*fishing sets	
Nets Net length and drop		Fishing days	Surface*days	
Long lines	Number of hooks Number of longline unit	Fishing hours Fishing days	Number of hooks*hours Number of longlines units*days/hours	

Annex H - Data Submission Calendar

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

Annex I - Shared stocks

English common name	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
Black spot seabream	Pagellus bogaraveo	Alboran Sea and the Straits of	Spain and Morocco

English common name	Scientific name	Area	Countries
		Gibraltar	
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 Serb 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)

Annex L - Fisheries Restricted Areas (FRAs)

Name of the FRA	Country	GSA	km ²
Lophelia reef 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 Eratosthenes Seamount	Cyprus	GSA 25	14 791.6
Gulf of Lions	France	GSA 7	3 741.6

Acronyms

- ADRIAMED Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea
- BMSY Biomass of Maximum Sustainable Yield
- BRP Biological Reference Point
- CAF Committee on Administration and Finance
- CAQ Committee on Aquaculture
- CoC Committee on Compliance
- CCAMLR Commission for the Conservation of Antarctic Marine Living Resources
- CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora
- COFI FAO Committee on Fisheries
- COPEMED Coordination to Support Fisheries Management in the Western and Central Mediterranean
- CP Contracting Party
- DCRF Data Collection Reference Framework
- EAM Environment and Aquaculture
- EASTMED Scientific and Institutional Cooperation to Support Responsible Fisheries in the Eastern Mediterranean
- EC European Commission
- EEZ Exclusive Economic Zone
- EU European Union
- FAD Fish Aggregating Device
- FAO United Nations Food and Agriculture Organization
- FIGIS FAO Fisheries Global Information System
- FIRMS FAO Fisheries Resources Monitoring System
- FMSY Fishing Mortality Rate of Maximum Sustainable Yield
- GFCM General Fisheries Commission for the Mediterranean
- GSA Geographical Sub Area
- IATTC Inter-American Tropical Tuna Commission
- ICCAT International Commission for the Conservation of Atlantic Tunas
- ICES International Council for the Exploration of the Sea
- IOTC Indian Ocean Tuna Commission
- IUCN World Conservation Union (International Union for the Protection of Nature)
- IUU Illegal, Unreported and Unregulated Fishing
- IWC International Whaling Commission
- MCS Monitoring, Control, and Surveillance
- MEDFISIS Mediterranean Fishery Statistics Information System
- MEDLEM Mediterranean Large Elasmobranchs Monitoring
- MEDSUDMED Assessment and Monitoring of the Fishery Resources and the Ecosystems in the Straits of Sicily
- MPA Marine Protected Area
- MSY Maximum Sustainable Yield
- NAFO Northwest Atlantic Fisheries Organisation
- NGO Non-Governmental Organization
- RFBs Regional fishery bodies

- RFMO Regional Fisheries Management Organization
- SAC Scientific Advisory Committee
- SC Sub-Committee
- SCESS Sub-Committee on Economic and Social Sciences
- SCMEE Sub-Committee on Marine Environment and Ecosystem
- SCSA Sub-Committee on Stock Assessment
- SCSI Sub-Committee on Statistics and Information
- SIPAM Information System for the Promotion of Aquaculture in the Mediterranean
- TAC Total Allowable Catch
- TECAM Technology and Aquaculture
- UN United Nations
- UNGA Resolutions United Nations General Assembly Resolutions
- WCPFC Western and Central Pacific Fisheries Commission
- WG Working Group
- WGBS Working Group on the Black Sea
- WGDS Working Group on Demersal Species
- WGSP Working Group on Small Pelagic Species
- VMS Vessel Monitoring System

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- Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area.
- Recommendation CM-GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area.
- Resolution GFCM/35/2011/1on 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.
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