D R A F T

GFCM Task 1: Operational Units (OUs)

Guidelines to compile OU data[1]

[1] The GFCM Task 1 concept is an outcome of the transversal Workshop on Stock Assessment and Operational Units (Rome, 26-28 June 2006). This draft document was drawn up by the Sub-Committee on Statistics and Information (Coordinated by Dr. Matthew Camilleri), the GFCM Secretariat and the FAO-MedFisis project. It essentially comprises guidelines for the compilation of OU data into a matrix and associated tables, together with the procedures required for the identification of OUs within fishing fleets.

THE GFCM DEFINITION FOR AN OPERATIONAL UNIT

"For the sake of managing fishing effort within a Management Unit, an Operational Unit is the group of fishing vessels practising the same type of fishing operation, targeting the same species or group of species and having a similar economic structure. The grouping of fishing vessels may be subject to change over time and depends on the management objective to be reached"

CONTENTS

1. Introduction

The process to identify Operational Units (OU) is carried in two parts:

Part 1 – Fleet data listing (inventory of fishingfleet)

Part 2 – Fleet data aggregation for OUs purpose

In Part 1, items at vessel level have been identified on the basis of the Task 1 tables proposed at the SCSI/SCSA/SCESS transversal workshop on Stock Assessment and Operational Units (Rome, Italy, 26-28 June 2006). The data fields' description is also provided later on in this document. Once data entry has been completed, it will be possible to proceed with the data aggregation for the GFCM Task 1 purpose.

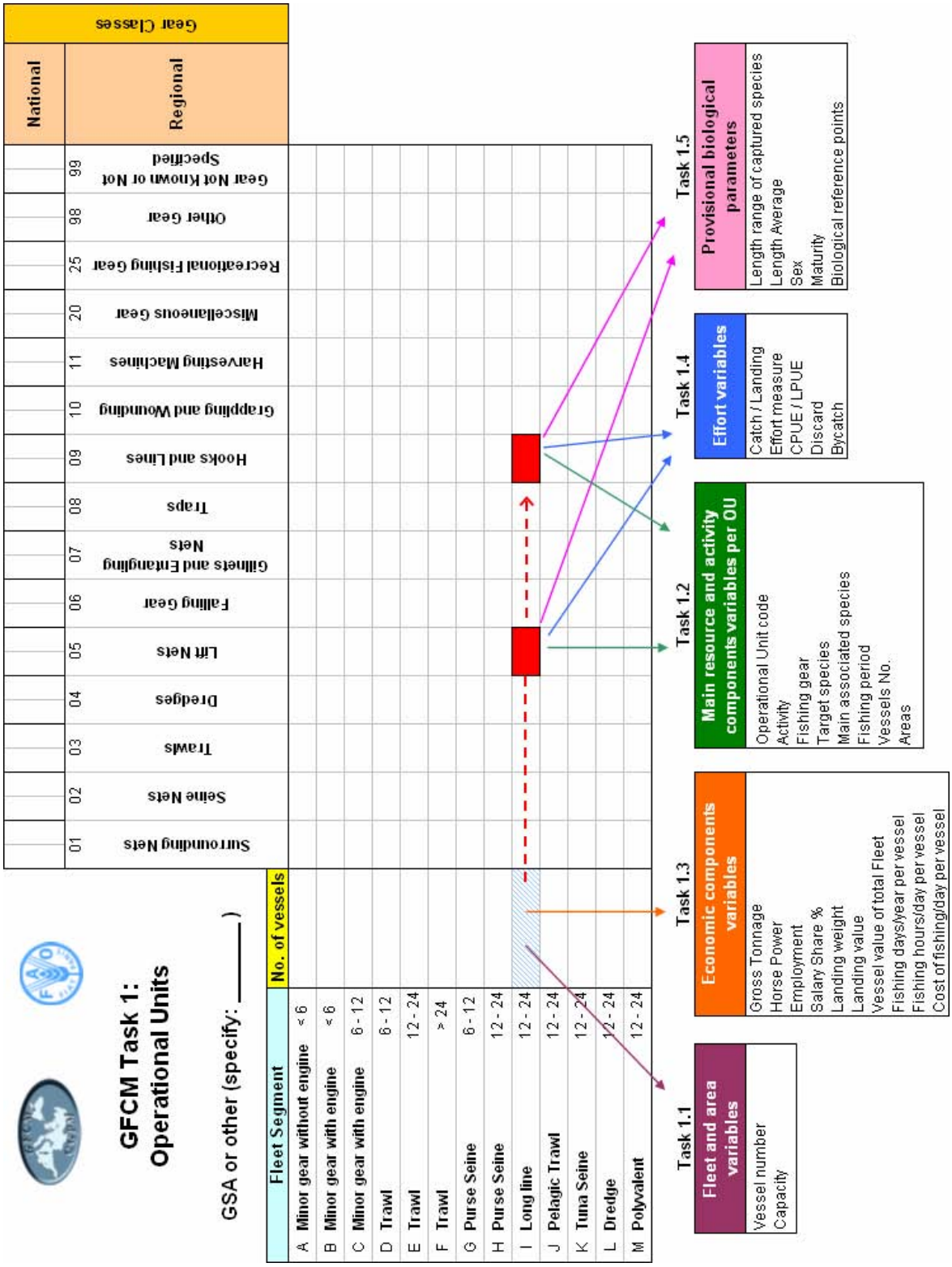
With regards to Part 2, the following five Task 1 tables are also described:

Task 1.1 – Fleet and area variables
Task 1.2 – Main resource and activity components variables per OU
Task 1.3 – Economic components variables
Task 1.4 – Effort variables
Task 1.5 – Provisional biological parameters

The final section of this document presents a step by step approach to complete the GFCM Task 1 Matrix and Tables.

2. Part 1 – Fleet data listing

GFCM Task 1 Matrix and Tables proposed at the SCSI/SCSA/SCESS transversal workshop on Stock Assessment and Operational Units (Rome, Italy, 26-28 June 2006).



2.1 Fleet data

On the basis of the Task 1 tables, the fields for data-entry into an Excel file are as follows.

TASK 1 – OPERATIONAL UNITS	FLEET DATA	
Task 1.1 – Fleet and area variables	1	Vessel Name
	2	Vessel Registration Number
	3	Flag
	4	Base Port
	5	GSA
	6	Vessel Type
	7	LOA
	8	SAC Fleet Segment
	9	GT
	10	GRT
Task 1.2 – Main resource and activity components variables per OU	11	Main Gear
	12	Gear Classes
	13	Activity
	14	Target species
	15	Main associated exploited resources
	16	Fishing period (start month)
	17	Fishing period (end month)
	18	Areas where this activity is practiced
Task 1.3 – Economic components variables	19	Engine Power (kW)
	20	Employment
	21	Salary Share %
	22	Landing weight
	23	Landing value
	24	Vessel value of total Fleet
	25	Fishing days/year per vessel
	26	Fishing hours/day per vessel
	27	Cost of fishing/day per vessel
	28	Yearly Fixed costs per vessel
Task 1.4 – Effort variables	29	Catch weight / Landing weight
	30	Effort measure
	31	CPUE / LPUE
	32	Discard
	33	By catch
Task 1.5 – Provisional biological parameters	34	Length range of captured species
	35	Length average
	36	Sex
	37	Maturity

2.2 Fleet data fields description

ITEMS	DESCRIPTION
1 **Vessel Name**	The name of the vessel.
2 **Vessel Registration Number**	The registration number assigned to the fishing vessel by the Port Authorities.
3 **Flag**	The flag of the vessel.
4 **Base Port**	The name of the docking port.
5 **GSA**	The Geographical Sub-Area.
6 **Vessel Type**	The type of the vessel according to the simplified version of the "International Standard Statistical Classification of Fishery Vessels by Vessel Types" (ISSCFV), based on the type of gear used by the vessels, approved by the CWP in 1984.
7 **LOA**	The principle longitudinal dimension of the hull of the vessel. If in doubt, the length needs to be measured from the bow to the stern.
8 **SAC Fleet Segment**	The fleet segmentation as proposed by the 5th session of the Scientific Advisory Committee (SAC).
9 **GT**	The Gross Tonnage of the vessel as registered, according to the International Convention on Tonnage Measurement of Ships, London, 1969 (in use since 1996).
10 **GRT**	The Gross Register Tonnage according to the Oslo Convention (1947) (in use until 1995). GRT represented the total measured cubic content of the permanently enclosed spaces of a vessel, with some allowances or deductions for exempt spaces such as living quarters [1 gross register ton = 100 cubic feet = 2.83 cubic metres].
11 **Fishing Gear**	The main gear used by the boat as registered. Indicate the name of the gear according to the "International Standard Statistical Classification of Fishing Gear" (ISSCFG) adopted during the 10th Session of the Coordinating Working Party on Fishery Statistics (CWP) (Madrid, 22-29 July 1980).
12 **Gear Classes**	The gear class according to the "International Standard Statistical Classification of Fishing Gear" (ISSCFG) adopted during the 10th Session of the Coordinating Working Party on Fishery Statistics (CWP) (Madrid, 22-29 July 1980).
13 **Activity**	The day at sea or the fishing hours spent by the vessel during the year. (Source: Catch and Effort Survey).
14 **Target species**	The Scientific name of the bio-economically most important target species (up to a maximum of five species).
15 **Main associated exploited resources**	The species, species group or assemblage exploited in association with the target species previously indicated.
16 **Fishing period (start month)**	The starting month of the fishing period (e.g.: October will be 10).
17 **Fishing period (end month)**	The ending month of the fishing period (e.g.: February will be 02).
18 **Areas where this activity is practiced**	The areas where this activity is practiced (expressed in descriptive way).
19 **Engine Power (kW)**	The engine power (kW) of the vessel.

20	**Employment**	The total number of people employed on the vessel.
21	**Salary Share %**	The percentage of the revenues after discounting commercial costs, daily costs and fuel costs that pertain to the crew. It will be distributed among the crew as salary.
22	**Landing weight**	The total landings in weight. (Source: Economic Survey).
23	**Landing value**	The volume of landed fish valued against actual market prices. It equals to quantities landed multiplied by the landing average price.
24	**Vessel value of total Fleet**	The total invested capital - value of hull, engine, gear and equipment. The replacement-value method can be used to estimate this parameter.
25	**Fishing days/year**	The number of fishing days per year. (Source: Economic Survey).
26	**Fishing hours/day**	The number of fishing hours per day. (Source: Economic Survey).
27	**Cost of fishing/day**	The daily expenses incurred in fishing activity, such as fuel, lubricants, etc. They are variable costs that depend on the time spent in fishing.
28	**Yearly Fixed costs**	The costs not directly connected with operational activity, such as non-routine maintenance, vessel insurance, taxes and dues, etc. The fixed costs are all the costs that are inevitable to pay yearly, independently from the time spent to fish.
29	**Catch weight / Landing weight**	The total catches / landings in weight. (Source: Catch and Effort Survey).
30	**Effort measure**	Calculate the effort measure according to the “Draft report of the SCSI/SCSA/SCESS transversal workshop on measurement and standardisation of fishing effort” (Fuengirola (Malaga), Spain, 30-31 May 2006).
31	**CPUE / LPUE**	Calculate the CPUE / LPUE (catches / landings per unit effort) as ‘Catch / Landing weight (CAS source)’ / ‘Fishing hours/year’, where ‘Fishing hours/year’ is calculated as ‘Fishing days/year’ * ‘Fishing hours/day’.
32	**Discard**	Indicate the portion of the total organic material of animal origin in the catch, which is thrown away, or dumped at sea for whatever reason. It does not include plant materials and post harvest waste such as offal. The discards may be dead, or alive.
33	**Bycatch**	Indicate the total catch of non-target animals. Discards are not a subset of bycatch since the target species is often discarded.
34	**Length range of captured species**	For target species, the minimum and maximum values measured (min-max, e.g.: Mullus barbatus 12-18cm).
35	**Length average**	For target species, the mean length.
36	**Sex**	For target species, the number of females expressed in percentage (%).
37	**Maturity**	Maturity stage (eg 1-5).

2.3 Data entry

The Excel data-entry file, has been divided into 4 worksheet:

1. Task 1 tables proposed at the SCSI/SCSA/SCESS transversal workshop on Stock Assessment and Operational Units (Rome, Italy, 26-28 June 2006).

2. Fleet_Data_1: single data (no multiple values) of the vessels (inventory of fishing fleet).

1 / 37	2 / 37	3 / 37	4 / 37	5 / 37	6 / 37	7 / 37	8 / 37	9 / 37	10 / 37	19 / 37	20 / 37	21 / 37	22 / 37	23 / 37	24 / 37	25 / 37	26 / 37	27 / 37	28 / 37
Vessel Name	Vessel Registration Number	Flag	Base Port	GSA	Vessel Type	LOA	SAC Fleet Segment	GT	GRT	Engine Power (kW)	Employment	Salary Share %	Landing weight (kg)	Landing value	Vessel value	Fishing days/year	Fishing hours/day	Cost of fishing/day	Yearly Fixed costs

3. Fleet_Data_2: multiple data values of the vessels.

1 / 37	2 / 37	11 / 37	12 / 37	13 / 37	14 / 37	15 / 37	16 / 37	17 / 37	18 / 37	29 / 37	30 / 37	31 / 37	32 / 37	33 / 37	34 / 37	35 / 37	36 / 37	37 / 37
Vessel Name	Vessel Registration Number	Fishing Gear	Gear Classes	Activity	Target species	Main associated exploited resources	Fishing period (start month)	Fishing period (end month)	Areas where this activity is practiced	Catch / Landing weight	Effort measure	CPUE / LPUE (kg/hours)	Discard	Bycatch	Length range of captured species (cm)	Length average (cm)	Sex	Maturity

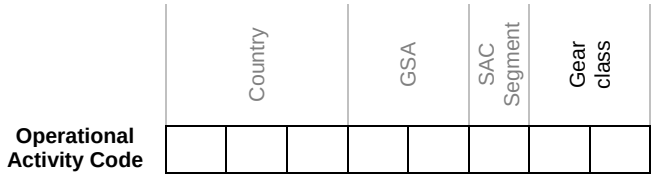
To enter multiple data values for one vessel, the Name and Register number of the boat must be typed for each additional data (e.g.: fishing gear or species).

4. The fleet data aggregation for Operational Units (see Part 2).

3. Part 2 – Fleet data aggregation for Operational Units

The description of the five tables which compose the OUs scheme:

3.1 Task 1.1 – Fleet and area variables

ITEMS	DESCRIPTION
GSA	GFCM Geographical Sub-Area as described in document GFCM:SAC6/2003/3 Conclusions and recommendations of the four sub-committees[2].
Country	The name of the country.
SAC Fleet segment	Fleet segmentation as proposed by the 5th session of the Scientific Advisory Committee (SAC)[3].
Vessel Number	Number of fishing vessels belonging to the fleet segment.
Capacity	Gross Tonnage (GT) or Gross Registered Tonnage (GRT). **GT** The Gross Tonnage according to the International Convention on Tonnage Measurement of Ships, London, 1969 (in use since 1996)[4]. **GRT** The Gross Register Tonnage according to the Oslo Convention (1947) (in use until 1995). (GRT represented the total measured cubic content of the permanently enclosed spaces of a vessel, with some allowances or deductions for exempt spaces such as living quarters [1 gross register ton = 100 cubic feet = 2.83 cubic metres]).
Operational Activity	Open a code for each activity developed around the year. Code composed as follows: - First three characters indicate the United Nations country abbreviation; - Followed by two-digit number identifying the GSA. This is the GSA code without the first two-digit common to all the Mediterranean Areas ('37'). - Followed by the letter of the SAC fleet segment; - Last 2-digit number indicates the gear class. 
Base ports	Port/s of operation of the given Operational Unit.

[2] ftp://ftp.fao.org/fi/DOCUMENT/gfcm/sac6/3e.pdf
[3] www.faocopemed.org/en/sac/docs.htm#general_docs (ftp://ftp.fao.org/docrep/fao/005/y7680b/y7680b00.pdf)
[4] www.admiraltylawguide.com/conven/tonnage1969.html

3.2 Task 1.2 – Main resource and activity components variables per OU

ITEMS	DESCRIPTION
Operational activity code	As above. For each the following data on the fishing activity practiced around the year must be obtained.
Activity	Days at sea or fishing hours.
Fishing gear	Abbreviated (two or three characters) according to the International Standard Classification of Fishing Gear (ISSCFG)[5].
Target species (FAO Code)	Scientific name of the bio-economically most important target species (up to a maximum of five species).
FAO species code	The FAO three-letter code based on the English common name as from the International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP)[6].
Main associated exploited resources	The species, species group or assemblage exploited in association with the target species previously indicated.
Fishing period	Self-explanatory (start month – end month, e.g.: from October to February will be 10-02).
Relative Weight	Percentage of total vessels included in the fleet segment that practiced this activity in this period.
Areas where this activity is practiced	Expressed in descriptive way.

3.3 Task 1.3 – Economic components variables

ITEMS	DESCRIPTION
Gross Tonnage	Total gross tonnage of fishing vessels belonging to the given Fleet Segment.
Engine Power	Total engine power (kW) of fishing vessels belonging to the given Fleet Segment.
Employment	Total number of people employed on fishing vessels belonging to the given Fleet Segment. The number of crew members can be estimated on a full time equivalent (FTE) basis.
Salary Share %	Percentage of the revenues after discounting commercial costs, daily costs and fuel costs that pertain to the crew. It will be distributed among the crew as salary.
Landing weight	Total landings in weight.
Landing value	The volume of landed fish valued against actual market prices. It equals to quantities landed multiplied by the landing average price.
Vessel value of total Fleet	This is defined as total invested capital – value of hull, engine, gear and equipment. The replacement-value method can be used to estimate this parameter.
Fishing days/year per vessel	Number of fishing days per year (average).

[5] www.fao.org/figis/servlet/static?dom=ontology&xml=sectionM.xml (Annex M I)
[6] www.fao.org/fi/statist/fisoft/asfis/asfis.asp

Fishing hours/day per vessel	Number of fishing hours per day (average).
Cost of fishing/day per vessel	These include daily expenses incurred in fishing activity, such as fuel, lubricants, etc. They are variable costs that depend on the time spent in fishing.
Yearly Fixed costs per vessel	These comprise costs not directly connected with operational activity, such as non-routine maintenance, vessel insurance, taxes and dues, etc. The fixed costs are all the costs that are inevitable to pay yearly, independently from the time spent to fish.

3.4 Task 1.4 – Effort variables

ITEMS	DESCRIPTION
Catch weight / Landing weight	The total catches / landings in weight.
Effort measure	The effort measure according to the "Draft report of the SCSI/SCSA/SCESS transversal workshop on measurement and standardisation of fishing effort" (Fuengirola (Malaga), Spain, 30-31 May 2006).
CPUE / LPUE	The CPUE / LPUE (catches / landings per unit effort) as 'Catch / Landing weight (CAS source)' / 'Fishing hours/year', where 'Fishing hours/year' is calculated as 'Fishing days/year' * 'Fishing hours/day'.
Discarded	Indicate the portion of the total organic material of animal origin in the catch, which is thrown away, or dumped at sea for whatever reason. It does not include plant materials and post harvest waste such as offal. The discards may be dead, or alive.
Bycatch	Indicate the total catch of non-target animals. Discards are not a subset of bycatch since the target species is often discarded.

3.5 Task 1.5 – Provisional biological parameters

ITEMS	DESCRIPTION
Length range of captured species	For target species, the minimum and maximum values measured (min-max, e.g.: Mullus barbatus 12-18cm).
Length average	For target species, the mean length.
Sex	For target species, the number of females expressed in percentage (%).
Maturity	Maturity scale (eg. 1 - 5).

4. A step by step approach to complete the GFCM Task 1 Matrix and Tables

1. List all fishing vessels in Fleet_Data_1, thus obtaining an inventory of the fleet. Particular attention must be given in assigning each vessel to its appropriate SAC Fleet Segment as this will determine and facilitate grouping into OUs. Criteria used are length, type of vessel and gear/s used.

2. Sort vessels into segments and enter the total number of vessels for each segment in the GFCM Task 1 Matrix.

3. Proceed to complete Part 2, Task 1.1 (Fleet and Area variables) and Task 1.3 (Economic Components variables), and enter relevant results into the Operational Units Worksheet.

   Fleet data will be aggregated as follows:

   1. Flag;
   2. Geographical Sub-Area;
   3. SAC Fleet Segment.

   Once the vessels with the same flag operating in the same Geographical Sub-Area and belonging to a particular Fleet segment have been selected, the following parameters could be calculated:

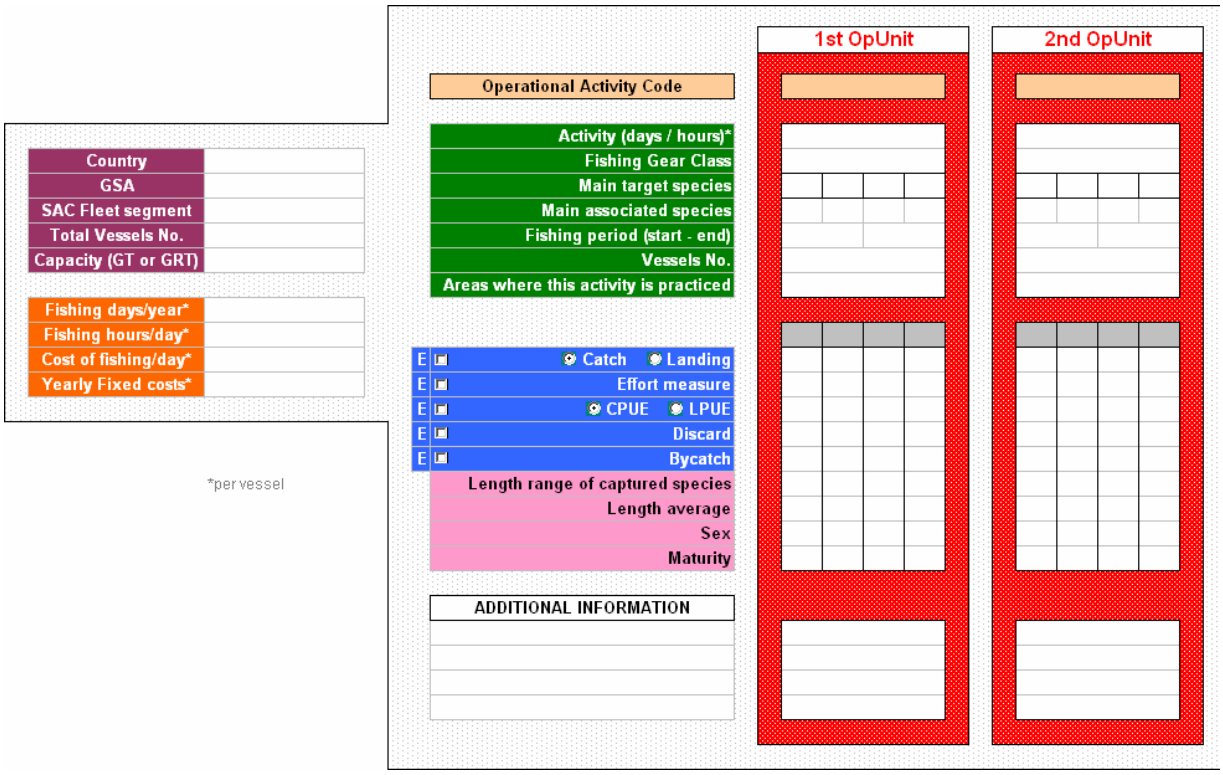
   From data in Task 1.1:

   a) total number of vessels;
   b) total capacity (GT or GRT).

   From data in Task 1.3:

   c) fishing days/year per vessel;
   d) fishing hours/day per vessel;
   e) cost of fishing/day per vessel;
   f) yearly Fixed costs per vessel.

   As shown in the following Operational Units worksheet (one for each Fleet Segment) this information would be common to all OUs within the segment.



4. Fill Fleet_Data_2 (multiple data values of the vessels) for each fleet segment separately. This is a breakdown of the fishing activities carried out by each vessel. For each type of fishing operation carried out by each vessel a new line must be filled in.

5. Proceed to complete Task 1.2 after sorting data in Fleet_Data_2 by gear class and target species.

6. Create the Operational Activity Code as follows (see Task 1.1):

	Country			GSA		SAC Segment	Gear class	
Operational Activity Code								

7. Enter the operational activity code for each OU identified and the relevant results emerging from Task 1.2 into the Operational Units Worksheet.

8. Complete tasks 1.4 and 1.5 for each operational unit and enter relevant results into the Operational Units worksheet. Note – in cases where more than one species are targeted biological parameters must be entered for each species.

Annex 1 – GFCM Geographical Sub-Area

Fishing Area Code	Geographical sub-area		Sub-Basin		Basin	
	Code	Name	Code	Name	Code	Name
37	01	Northern Alborean Sea	37.1.1	Balearic	37.1	Western
	02	Alborean Island				
	03	Southern Alborean Sea				
	04	Algeria				
	05	Balearic Island				
	06	Northern Spain				
	07	Gulf of Lions	37.1.2	Gulf of Lions		
	08	Corsica Island	37.1.3	Sardinia		
	09	Ligurian and North Tirrenian Sea				
	10	South and Central Tirrenian Sea				
	11	Sardinia				
	12	Northern Tunisia				
	13	Gulf of Hammamet	37.2.2	Ionian	37.2	Central
	14	Gulf of Gabes				
	15	Malta Island				
	16	South of Sicily				
	17	Northern Adriatic	37.2.1	Adriatic		
	18	Southern Adriatic Sea				
	19	Western Ionian Sea	37.2.2	Ionian		
	20	Eastern Ionian Sea				
	21	Libya				
	22	Aegean Sea	37.3.1	Aegean	37.3	Eastern
	23	Crete Island				
	24	South of Turkey	37.3.2	Levant		
	25	Cyprus Island				
	26	Egypt				
	27	Levant				
	28	Marmara Sea	37.4.1	Marmara		
	29	Black Sea	37.4.2	Black Sea		
	30	Azov Sea	37.4.3	Azov Sea		

Annex 2 – Provisional List of the GFCM Countries

Short name English	UNDP[7] code	ISO[8] ALPHA-3 code
Albania	ALB	ALB
Algeria	ALG	DZA
Bulgaria	BUL	BGR
Croatia	CRO	HRV
Cyprus	CYP	CYP
Egypt	EGY	EGY
France	FRA	FRA
Greece	GRE	GRC
Israel	ISR	ISR
Italy	ITA	ITA
Japan	JPN	JPN
Lebanon	LEB	LBN
Libyan Arab Jamahiriya	LIB	LBY
Malta	MAT	MLT
Monaco	MNC	MCO
Morocco	MOR	MAR
Romania	ROM	ROM
Serbia and Montenegro	YUG	SCG
Slovenia	SVN	SVN
Spain	SPA	ESP
Syrian Arab Republic	SYR	SYR
Tunisia	TUN	TUN
Turkey	TUR	TUR

[7] United Nations Development Program
[8] ISO - International Organization for Standardization

Annex 3 – Simplified Classification of Fishery Vessels by Vessel Types (ISSCFV) in use since 1996

Simplified version[9] of the "International Standard Statistical Classification of Fishery Vessels by Vessel Types" (ISSCFV), based on the type of gear used by the vessels, approved by the CWP in 1984.

ISSCFV	Vessel type	Standard abbreviation
0100	Trawls	TO
0200	Purse Seiners	SP
0300	Other Seiners	SOX
0400	Gill Netters	GO
0500	Trap Setters	WO
0600	Long Liners	LL
0700	Other Liners	LOX
0800	Multipurpose vessels	MO
0910	Other fishing vessels	DO
0900	Dredgers	FX

[9] www.fao.org/figis/servlet/static?dom=ontology&xml=sectionL.xml (Annex L III)

Annex 4 – Fleet Segmentation

proposed by the 5th session of the Scientific Advisory Committee (SAC)

Groups	< 6 metres	6-12 metres	12-24 metres	More than 24 metres
1. Minor Gear without engine	A	⇐		
2. Minor Gear with engine	B	C		
3. Trawl	⇒	D	E	F
4. Purse Seine		G	H	⇐
5. Long line			I	
6. Pelagic Trawl		⇒	J	⇐
7. Tuna Seine			K	⇐
8. Dredge		⇒	L	
9. Polyvalent			M	

A - **Minor Gear without engine**. All vessels less than 6 metres in length without an engine (wind or oar propulsion). Exceptionally, vessels without engine longer than 6 metres can be included.

B - **Minor Gear with engine less than 6 m. length**. All vessels under 6 metres length with engine, excluding trawl vessels.

C - **Minor Gear with engine between 6 to 12 metres**. All vessels between 6 to 12 metres length with engine, excluded specific gears as demersal trawl, purse seine, pelagic trawl and dredge.

D - **Trawlers less than 12 m. length**. All demersal trawlers less than 12 metres. Exceptionally, trawl vessels under 6 metres can be included.

E - **Trawlers between 12 to 24 m**. Demersal trawl between 12 to 24 metres.

F - **Trawlers of more than 24 m**. Demersal trawl with length of more than 24 metres

G - **Purse Seines between 6 to 12 m**.

H - **Purse Seines between 12 to 24 m**. Excluded Tuna Seine. Exceptionally, Purse Seines vessels of more than 24 metres, can be included

I - **Long line of more than 12 m**. Long line as exclusive gear more than 12 m. Exceptionally, vessels more than 24 metres, can be included.

J - **Pelagic Trawlers**. All Pelagic Trawl vessels, but normally this group is between 12 to 24 metres.

K - **Tuna Seine**. All Tuna Seine vessels.

L - **Dredge**. All Dredge vessels. Normally this group is between 12 to 24 metres, but exceptionally dredges under 12 metres can be included.

M - **Polyvalent (and Other) longer than 12 m.** All vessels longer than 12 metres, that use different gears along the year or use a gear not already listed in this classification.

Annex 5 – International Standard Classification of Fishing Gear (ISSCFG)

The "International Standard Statistical Classification of Fishing Gear" (ISSCFG[10]) adopted during the 10th Session of the Coordinating Working Party on Fishery Statistics (CWP) (Madrid, 22-29 July 1980).

ISSCFG	Fishing gear	Standard abbreviation
0110	With purse lines (purse seines)	PS
0111	One boat operated purse seines	PS1
0112	Two boats operated purse seines	PS2
0120	Without purse lines (lampara)	LA
0210	Beach seines	SB
0220	Boat or vessel seines	SV
0221	Danish seines	SDN
0222	Scottish seines	SSC
0223	Pair seines	SPR
0290	Seine nets (not specified)	SX
0310	Bottom trawls	TB
0311	Bottom beam trawls	TBB
0312	Bottom otter trawls	OTB
0313	Bottom pair trawls	PTB
0314	Bottom nephrops trawls	TBN
0315	Bottom shrimp trawls	TBS
0319	Bottom trawls (not specified)	TB
0320	Midwater trawls	TM
0321	Midwater otter trawls	OTM
0322	Midwater pair trawls	PTM
0323	Midwater shrimp trawls	TMS
0329	Midwater trawls (not specified)	TM
0330	Otter twin trawls	OTT
0349	Otter trawls (not specified)	OT
0359	Pair trawls (not specified)	PT
0390	Other trawls (not specified)	TX
0410	Boat dredges	DRB
0420	Hand dredges	DRH
0510	Portable lift nets	LNP
0520	Boat-operated lift nets	LNB
0530	Shore-operated stationary lift nets	LNS
0590	Lift nets (not specified)	LN
0610	Cast nets	FCN
0690	Falling gear (not specified)	FG
0710	Set gillnets (anchored)	GNS
0720	Driftnets	GND
0730	Encircling gillnets	GNC

[10] www.fao.org/figis/servlet/static?dom=ontology&xml=sectionM.xml

0740	Fixed gillnets (on stakes)	GNF
0750	Trammel nets	GTR
0760	Combined gillnets-trammel nets	GTN
0790	Gillnets and entantling nets (not specified)	GEN
0791	Gillnets (not specified)	GN
0810	Stationary uncovered pound nets	FPN
0820	Pots	FPO
0830	Fyke nets	FYK
0840	Stow nets	FSN
0850	Barrier, fences, weirs, etc	FWR
0860	Aerial traps	FAR
0890	Traps (not specified)	FIX
0910	Handlines and pole-lines (hand operated)	LHP
0920	Handlines and pole-lines (mechanised)	LHM
0930	Set longlines	LLS
0940	Drifting longlines	LLD
0950	Longlines (not specified)	LL
0960	Trolling lines	LTL
0990	Hooks and lines (not specified)	LX
1010	Harpoons	HAR
1110	Pumps	HMP
1120	Mechanised dredges	HMD
1190	Harvesting machines (not specified)	HMX
2000	Miscellaneous gear	MIS
2500	Recreational fishing gear	RG
9800	Other Gear	NK
9900	Gear not known or not specified	NK

Annex 6 – Aquatic Sciences and Fisheries Information System (ASFIS)

The FAO Fishery Information, Data and Statistics Unit (FIDI) collates world capture and aquaculture production statistics at either the species, genus, family or higher taxonomic levels in 1,674 statistical categories (2004 data) referred to as species items.

ASFIS list of species includes 10,650 species items selected according to their interest or relation to fisheries and aquaculture. For each species item stored in a record, codes (ISSCAAP group, taxonomic and 3-alpha) and taxonomic information (scientific name, author(s), family, and higher taxonomic classification) are provided. An English name is available for most of the records, and about one third of them have also a French and Spanish name. Information is also provided about the availability of fishery production statistics on the species item in the FAO databases.

ASFIS Version: February 2006.

For more details, please see the FIGIS website
(http://www.fao.org/figis/servlet/static?xml=FIDI_STAT_org.xml&dom=org&xp_nav=3,3,2&xp_banner=fi)

Annex 7 – Effort measure

The effort measure according to the "Draft report of the SCSI/SCSA/SCESS transversal workshop on measurement and standardisation of fishing effort" (Fuengirola (Malaga), Spain, 30-31 May 2006).

Gear	Number and dimension	Capacity	Activity	Nominal Effort[11]
Dredge	Open mouth			Dredged bottom surface3
Trawl	Type of trawl (pelagic, bottom) GT and/or GRT Engine power Mesh size Size of the net (opening) Speed	GT	Time fishing	GT*days GT*hours
Purse seine	Length of the net GT Light power Number of small boats	GT Length of the net	Search time Set	GT * Fishing sets[12] Length of the net * fishing sets
Nets	Type of net (trammel net, driftnet, bottom) Net length (used in regulations) GT Net surface Mesh size	Net length	Time fishing	Net length * days
Long lines	Number of hooks GT Number of longline units Characteristics of hooks Bait	Number of hooks Number of longline units	Time fishing	Number of hooks * hours Number of hooks * days Number of longline units * days/hours
Traps	GT	Number of traps	Time fishing	Number of traps * days
Purse seine/FADs	Number of FADs	Number of FADs	Number of trips	Number of FADs * Number of trips

[11] It refers to nominal effort 2 Should be referred to a particular area (indicating the surface) to estimate fishing intensity (effort • km-2) and to relate the effort to exploited communities

[12] The effort measures that do not include a time activity should be referred to a period of time (i.e. by year)