



FAO - COPEMED - MBRC

**ARTISANAL FISHERIES IN LIBYA
CENSUS OF FISHING VESSELS AND
INVENTORY OF ARTISANAL FISHERY METIERS**

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CONTENTS

1. DEFINITION OF A METIER FOR COPEMED USE.....	1
2. INTRODUCTION	1
3. SURVEY ORGANISATION.....	2
3.1. Survey team.....	2
3.2. Training	2
3.3. Logistics	2
Vehicles	2
Computers	2
Software	3
Survey forms	3
3.4. Survey execution and schedule	3
4. LANDING SITES	3
5. CENSUS OF FISHING VESSELS	4
5.1. Starfish-Libyastat database	4
5.2. Types and number of small fishing crafts.....	4
5.3. Boat size	5
5.4. Engine power	6
5.5. Gear used.....	6
6. METIERS IN LIBYA.....	7
6.1. ArtFiMed database.....	7
6.2. Metiers practised in Libya.....	7
6.3. Gear Description	7
7. DOCUMENTATION ON ARTISANAL FISHERIES IN LIBYA	7
APPENDIX I SURVEY FORMS.....	14
APPENDIX II CODE LISTS FOR LIBYA FS2000.....	22
APPENDIX III FISHES FROM LIBYA, COMMON AND SCIENTIFIC NAMES	25
APPENDIX IV PORTS AND LANDING SITES IN LIBYA.....	27
APPENDIX V COMBINATION OF GEAR USED	28
APPENDIX VI EXAMPLE OF METIERS IN LIBYA.....	33
APPENDIX VII DESCRIPTION OF FISHING GEAR CURRENTLY USED IN LIBYA	34

1. DEFINITION OF A METIER FOR COPEMED USE

The term "Métier" originates from old days in France when "le grand métier" (the big job), corresponded to the distant fisheries for cod, mainly in Newfoundland Greenland and Iceland where sail boats use to go for eight month trips. It can be compared to today's high sea or industrial fisheries. As opposed were "les petits métiers" (the small jobs), concerned with local fisheries carried out by small fishing craft, what we now call coastal or artisanal fisheries.

"Métier" is largely used to characterise a practical concept used in fisheries managements that englobes target species, fishing gear and fishing grounds.

Table 1 below summarises the constituting elements of a métier

Table 1 Elements constituting the "Métier"

METIER				
Fishing gear (1)	Species		Fishing zone (4)	Fishing season (5)
	Target (2)	Associated (3)		
<p>(1) A fishing gear is designed for a target species and usually involves the use of a type of boat</p> <p>(2) Species or species group searched by the fisherman</p> <p>(3) Associated species and other commercial species caught at the same time and with the same gear than the target species</p> <p>(4) Geographic zone where the "métier" is operated (When such information is not available, the fishing vessel base port can be a good geographical information)</p> <p>(5) Period of the year during which the "métier" is practised</p>				

A "métier" corresponds to a combination of *gear, target species, geographic fishing zone*. It is a pragmatic definition for the purpose of studying management systems using the traditional knowledge. The time dimension does not directly appears, but it is underlying through the seasonal nature induced by the couple target species / fishing zone.

The "Métier" notion allows to better define the real effort on a stock and involves fleets distribution that takes into account strategies, practices and know-how of fishermen. It allows to identify the most operational management units.

2. INTRODUCTION

A workshop on Artisanal Fishery in the Western Mediterranean (Morocco, Algeria Tunisia, Libya, Italy, France and Spain) was organised by the FAO COPEMED Project in Malta, from 9 to 12th March 1998. Artisanal fisheries in the region are important and complex, considering the diversity of fish caught, gear used, the fact that some stocks are shared between countries, the purpose of the workshop was to convene the participating countries to compare their definitions of artisanal fisheries. An attempt was made to attain working definitions to make information comparable. The information provided by the countries on the knowledge of their artisanal fishery was presented and a number of recommendations for future work were made.

The Frame survey of the Libya fisheries (FS93) was conducted in 1993 in cooperation with the MBRC (Marine Biology Research Center) and the FAO "LIBFISH" Project (LIB/88/009-GCP/LIB/021/IsDB).

Different scopes and the situation has notably changed since 1993, it was felt necessary to conduct a new Frame Survey in 2000.

The experience and information gained during the FS93 facilitated the new exercise, as the majority of fishing sites were known and the methodology for survey and analysis used in 1993 could be adapted to the current situation and also take the new requirements into account.

During the FS2000 replication, an attempt was made to better evaluate the real operational fishing units. This was made easier as the fishing season was starting, the importance of identification of a knowledgeable local informant at each fishing site will be crucial

3. SURVEY ORGANISATION

3.1. Survey team

Eight MBRC staff designated by the Director to participate to the survey were available from the beginning on 26 March 2000, the Artisanal Fisheries informant Mr Abdallah Ben Abdallah was also present. With the consultant, this constituted a 10 persons survey team. This differs from the original plan where only six MBRC enumerators were required, but taking into account the amount of information to be collected, the number of sites to visit and the impossible choice to decide who to leave behind, all proposed persons were accepted in the survey team.

It must be mentioned that the survey team has performed exceptionally well, all members were keen to work and performed in their best possible manner.

In addition to the consultant, the team was composed of:

- Abdallah Ben Abdallah, Artisanal Fisheries informant;
- Ahmed Amer, MBRC Scientist, COPEMED focal point;
- Akram Turki, MBRC Scientist;
- Ali El Gushti, MBRC Scientist;
- Ali Fituri, MBRC Scientist;
- Ehab El-Srif, MBRC Scientist;
- Esmail Shugman, MBRC Scientist;
- Hassan Ghebli, MBRC Scientist; and
- Hesham Ghmati, MBRC Scientist.

3.2. Training

This exercise gave a unique opportunity to the survey team members (MBRC scientists and the artisanal fisheries consultant) to acquire or improve their knowledge on Libya's fisheries. For some, this was the first occasion to be directly in contact with fishermen's environment.

At varied levels, depending upon individual interests and capabilities, several topics were covered:

- survey planning and organisation;
- interview and data acquisition techniques;
- survey forms;
- use of databases, data entry and verification;
- GPS and map use;
- fishing gear specifications description and use; and
- fisheries métiers.

3.3. Logistics

Vehicles

Two cars were made available with some delays on 11 and 16 April 2000 respectively. To cope with these delays, the survey plan was changed and instead of beginning from East and move systematically towards West, field work started on 6 April 2000 in the sites close to Tripoli, using both alternative office cars supplied by the MBRC and survey team members own cars.

Computers

Most MBRC computers are fitted with Windows 95 with Arabic support, both ArtFiMed and Starfish-Libya can be installed but do not run properly, as some "DLL" files are said not to be found. After some unsuccessful attempts to solve the problem, it was decided not to spend any more time on this issue as in any

case these computers were not needed for survey work, their use was only envisaged for software training purpose.

Among MBRC computer made available, only one has a CD-ROM, its speed is too slow to read the installation CD-ROM. Laplink was used instead to transfer data and programs from one computer to the other. The COPEMED computer and printer worked after some adjustments and the procurement of supplies.

Software

Some difficulties were encountered in installing the software in MBRC computers, however during survey the two software **ArtFiMed** and **Starfish-Libya** were made operational on three computers: the COPEMED desktop at the MBRC, the COPEMED laptop and the consultant own laptop.

Survey forms

After field test, the survey forms included in both software were found unsuitable. The layout is not practical for fieldwork as it follows the logic of data entry rather than the logic of interview. Also, while conducting the survey on boat inventory and métiers concurrently, some items on fishing gears were duplicated in the two sets of forms. The original forms would have used lots of sheets, this is important when you are not sure the photocopy machine will last all this paper.

The two pages ArtFiMed forms, one for Port and one for each Métier were reduced to one single page to record one port and four métiers, the same form is used for consecutive métiers in the same port.

The five pages initial form for StarFish-Libyastat was adapted to the Libyan situation; unnecessary and redundant items were removed and the layout was modified. Two different forms were prepared, one for small craft reduced to two pages and a detailed one for larger boats using four pages are. Codes were as much as possible incorporated in the forms as choice selections, so as to minimise time for searching on a separate code sheet. Revised survey sheets, reference tables of codes, and species list are given respectively in Appendices I, II and III.

3.4. Survey execution and schedule

On the basis of established administrative boundaries, the coast was divided in three different regions (Figure 1). Stratum I Tripoli, extends from the border with Tunisia to Wadi el Kham, just West of Zliten; Stratum II Gulf of Sirt, comprises the central coastline along the Gulf of Sirt, between Wadi el Kaam and Azzuaytina; and Stratum III Jabal Aghdar, runs from Azzuaytina to the Egyptian border.

The entire coastline (1970 km) was covered over the period from 8 April to 10 May 2000. For the part comprised between the border with Tunisia and Missurata, fieldwork was implemented on day trips out of Tripoli, during the period from 8 to 24 April. Fieldwork towards the East, between Missurata and the border with Egypt, was completed during a two-week trip from 29 April to 3 May. Data corresponding to this part were entered in the computers during the trip.

4. LANDING SITES

In 1993 all possible landing sites and all crafts (including non fishing vessels sail boats and new boats in the factory) were registered. For the FS2000 survey, the emphasis was put on sites and vessels really active in the fishery. During the present survey, the information on landing sites has been updated, for each site a series of characteristics were recorded: GPS position, picture, access, description and infrastucures.

Six new landing sites were identified during FS2000. Considering the number of abandoned sites from 1993 and sites where no boats were found, it is possible to say that out of a total of 135 sites, 76 are considered active. These sites range from beaches with one or two fishing craft to harbours hosting several hundreds. The list of landing sites including their geographical coordinates is given in Appendix IV.

Of all sites, 20 are major ones with more than 25 boats, they host 76% of the entire fleet; 12 have more than 50 boats and host 61% of the fleet (table 2),.

Table 2 Frequency of ports by classes of number of boats hosted

Number of Boats	0	1-4	5-9	10-24	25-49	50-99	>100	Total
Ports/Fishing sites	59	23	14	19	8	6	6	135

5. CENSUS OF FISHING VESSELS

Results presented in this section are only part of all that can be extracted and analysed from the database. It is limited to the number and characteristics of vessels, their activity and the fishing gear they operate.

5.1. Starfish-Libyastat database

Detailed information and characteristics of all fishing craft are contained in the Starfish-Libyastat database. Each boat corresponds to one record, each record offers the possibility to register about 250 items to take into account the wide range of information to characterise vessels and the diversity of fishing craft. Information is assembled in major groups:

- Vessel characteristics
- Fishing uthorisation
- Structural characteristics
- Engine
- Electonic equipment
- Deck machinery
- Ownership
- Crew
- Home port/operative port
- Fishing operation
- Transformation equipment
- Preserving equipment
- Otehr equipment
- Safety equipment
- General remarks

When duly completed and updated, Starfish-Libyastat database will offer the possibility to become a registry of fishing vessels and manage fishing licences.

5.2. Types and number of small fishing crafts

The definitions of fishing craft type used in the FS93 analysis were based on the most common local names in current use. For the FS2000 craft types were grouped as indicated in table 3.

A total of 1866 artisanal fishing vessel was inventoried and their characteristics recorded on survey sheets given in Appendix I.

Table 4 and Figure 2 give the number of fishing craft by type and region. Over half (55%) of boats are found in the Tripoli area, while the other two area share respectively 23% in the Gulf of Sirt and 22% in Jabal Aghdar. Batah represent a small fraction of the boats (4%), they are mainly found in the Farwah lagoon in the Tripoli area. Flouka represent 61% of all fishing crafts with more than half in Tripoli region. Mator account for 28% and are roughly evenly distributed over the three regions. Lampara used to catch small pelagics represent 7% of the artisanal fleet and are mainly located in the Tripoli region.

Table 5 and Figure 3 give the distribution of fishing crafts by status of activity. To better determine the capacity of the Libya artisanal fishing fleet, an attempt was made to determine the fishing craft status of activity; whether boats are operational, non operational or about to become operational with repairs. In large harbours where a local informant could always be found, information on a particular boat was easily obtainable. On isolated fishing sites often nobody was available or knowledgeable; indices such as presence of gear on board or nearby and evidence of recent use helped determining the status of activity. When such indices were not obvious, the boat was recorded as "unknown".

Unknown activity boats represent 2% of the entire artisanal fishing fleet, they are mainly constituted of Flouka. Operational boats represent 68%, while non operational and boats under repair amount together to 30%. There is a large proportion of Mator under repair and not operational, one possible explanation to this observation could be that many of these were purchased/constructed with SMW incentives and they faced difficulties to remain operational for lack of qualified crew, gear, spare parts and also as owners may be investors with no or limited knowledge of fishing.

Table 3 Types of artisanal fishing boats in Libya

FS2000	FS1993
Batah	<i>Batah:</i> 7-8 m flat-bottomed boat <i>used to</i> fish gillnets and pots (<i>octopus</i>) in shallow lagoon waters; propelled by outboard engine for commuting then with a pole during work.
Flouka	<i>Gaik:</i> double-ended boats of 4-6 m, derived from traditional craft that were propelled by oars, often now <i>adapted</i> for outboard engine propulsion; more common in the western part of the country.
	<i>Flouka:</i> small fishing craft of <i>varied</i> sizes ranging from 2 to 7 m; shapes are diverse but generally with a flat transom and no deck; powered by outboard engines.
Mator	<i>Mator:</i> generally greater than 5-6 m in length running up to 18 m or more, with deck and roof for the <i>smallest units</i> , wheel house, fish hold, and net hauler for the largest; shape and design similar to units found in Tunisia, Greece and Egypt.
Lampara fishing unit	<i>Lampara:</i> usually 12-13 m with deck, inboard engine, a small roof and a purse seine winch; associated with one to three <i>Dghaissas</i> carrying kerosene or butane gas lights to catch small pelagic fish using light attraction at night; some units may convert to net and/or line fishing during the off-season; only present in the western part of Libya.
	<i>Dghaissa:</i> 7-8 m, without <i>deck</i> and engine; serves as light boat in association with the <i>Lampara</i> .

Table 4 Fishing craft by type and region

	Batah	Flouka	Mator	Lampara	Total
Tripoli	65	662	187	115	1029 (55%)
Gulf of Sirt	-	211	192	19	422 (23%)
Jabal Aghdar	3	262	149	1	415 (22%)
Total	68 (4%)	1133 (61%)	530 (28%)	135 (7%)	1866

Table 5 Fishing craft by type and activity

	Operational	Non operational	Under repair	Unknown	Total
Batah	57	9	1	1	68
Flouka	839	99	174	23	1135
Mator	283	39	200	6	528
Lampara	87	7	37	4	135
Total	1266 (68%)	154 (8%)	412 (22%)	34 (2%)	1866

5.3. Boat size

Figure 4 represents the size range of fishing crafts used in Libya.

Batah, mainly used in Farwah lagoon for trammel net and pots fishing for octopus are build on the same model and almost uniformly 6 m in length.

Flouka range from 3 to 7,5 m and show two peaks at 5 and 6 m, this could probably be traced back to two models used in the shipyards.

Mator show a regular range of sizes from 6 m for the smallest to 18 m for the largest, the average size lies between 12 and 13 m.

As for Lampara the size ranges from 8 to 17 with two peaks at 12 and 14 m, the lampara fishery requires large boats as it involved a numerous crew and a large seine net.

5.4. Engine power

Figure 5 gives the engine power used by the different fishing vessels, Batah and Flouka use outboard engines while Mator and lampara use inboard engines.

Batah and flouka are mainly powered by 15 and 25 HP engines corresponding to the most commonly available Japanese outboard engines. For large flouka engines up to 55 HP have been recorded.

Mator and Lampara inboard engines range from 20 to 320 HP, several peaks can be observed 80, 120, 160, 200 HP, they correspond to the brand of engines most commonly used by the ship builders in Tunisia Libya or Egypt. For example the 80 HP peak corresponds to Lister UK made engines.

5.5. Gear used

Results presented in this section are only part of all that can be extracted and analysed from the database. It is limited to the number and characteristics of vessels, their activity and the fishing gear they operate.

As part of information collected during the census survey, is the fishing gear used by individual boats in one year. Out of 1866 boats such information was available for 1269 (68%). Table 6 and Figure 5 give the occurrence of use of a fishing gear for each type of boat, percentages are calculated over the total of known use of fishing gear.

Table 6 Occurrence of use of fishing gear by type of boat

Gear local name	Gear english name	Batah	Flouka	Mator	Lampara	All boats
Halg	Trammel net	43	477	203	4	727 (30%)
Bringali deshi	Longline medium hooks	0	233	201	1	435 (18%)
Bringali ghashin	Longline large hooks	4	171	208	2	385 (16%)
Beyatah	Gillnet 50mm	2	196	34	11	243 (10%)
Bringali rgig	Longline small hooks	4	60	53	1	118 (5%)
Lampara	Lampara	0	0	7	92	99 (4%)
Shleef joghali	Hand line	0	76	8	0	84 (3%)
Sertma reash	Trolling line, feather	0	60	8	0	68 (3%)
Mashruah	Gillnet 40mm	0	39	5	1	45 (2%)
Shleef morjan	Hand line	0	40	5	0	45 (1%)
Garush	Pots	0	30	2	0	32 (1%)
Sertma taoum	Trolling line, live bait	0	25	3	0	28 (1%)
Lambukara	FAD	0	25	1	0	26 (1%)
Ghates sfenj	Diving for sponge	0	0	23	0	23 (1%)
Halg Gamberi	Shrimp Trammel net	0	18	0	0	18 (1%)
Ghates garnet	Diving for octopus	0	2	9	1	12 (--%)
Miscellaneous	-	0	30	10	1	41 (2%)
Not known		25	385	144	43	597 -
		78	1867	924	157	3026

Five most commonly used fishing gear represent 79% of the total use of fishing gear. They are the trammel net (halig) three longlines (bringali) with medium, large and small hooks (deshi, ghashin and rgig) and a 50 mm mesh size gillnet (mashruah).

Batah in the Farwah lagoon use mostly trammel nets and pots. Flouka work mainly with Trammel nets (32%) then longlines medium hooks (16%), longlines large hooks (12%) and 50 mm gillnet (13%). Mator are fishing with three gear in almost same proportion (26%), trammel nets and longlines with medium and large hooks are used simultaneously. Lampara boats being specialised use their dedicated gear the lampara; they may also occasionally convert to the use of other gear when the sardine season is over.

Each boat can use one or several gear either simultaneously or successively or any combination of this. From the available information on the use of fishing gear by each boat (1269 boats out of 1866), an analysis was made by type of boats. A total of 261 combination of gear used were identified for the whole of Libya and all boats, for each combination the number of boats by type was determined, the detail of these result is given in appendix V.

6. METIERS IN LIBYA

6.1. ArtFiMed database

The information to qualify and quantify the artisanal fisheries métiers used in Libya were collected using the forms in appendix I, data were then entered in the ArtFiMed database. The main features include:

- GPS coordinates of fishing ports and landing sites (FS93 sites were also updated);
- site description and photograph;
- métiers in use at each site including season, number of boats, number of fishermen, depth range and area;
- description and specification of fishing gear and their use.

6.2. Metiers practised in Libya

In each port one or several knowledgeable fishermen were asked to supply information on the gear that were used by boats based in their port, with indications of target and accessories species, fishing depth, range of action on either side of the port, type of fishing grounds, season, number of boats and crew involved. It must be mentionned that for lack of time it was not possible to collect this information out of each and every port or landing site, however only sites of minor importance have been left out and in terms of fishing craft, over 90% of the fleet is considered to have been covered.

For each gear-species association out of a particular port, the geographical area where they are operated was determined using the depth range and the boat range on either side of the port. This was further converted with ArcView using a two miles grid referenced representation of Libyan waters.

The métiers in Libya according to the definition earlier mentionned are now available as a combination of gear, species and geographical area. The seasonality component of each métier is also included in the database. A total of 438 métiers have been enumerated. An example of print out of the database is presented in Appendix VI.

6.3. Gear Description

A description of all fishing gear currently in use in Libya is given in Appendix VII. For each gear, the following information is given:

- specifications (dimensions, material, mesh size, hook size, mounting, etc.);
- number of unit of gear used by one boat;
- main target species;
- depth range of use;
- bottom type;
- season; and
- fishing method.
- picture of the gear and/or of the boat to operate (pictures of some gear are not available)

7. DOCUMENTATION ON ARTISANAL FISHERIES IN LIBYA

Lamboeuf, M., A. Mujahid, & N. Elkebir. 'Reconnaissance survey of the artisanal fishing fleet of Libya.'
TBN No. 1, April 1994. (En/Ar)

Reynolds, J.E. & M. Lamboeuf. '1993 Libyan fisheries frame survey planning & preparation workshop.' TBN No. 4, April 1994. (En)

Reynolds, J.E. & M. Lamboeuf. '1993 Libyan fisheries frame survey: Data handling/dBase management workshop.' TBN No. 6, May 1994. (En)

Reynolds, J.E., M. Lamboeuf, A. Ben Abdallah, A. Abukhader, R. Abdulbari, & A. Nafati. 'Preliminary findings of the 1993 Libyan marine fisheries frame survey: Workshop proceedings.' TBN No. 11, June 1994. (En/Ar)

Lamboeuf, M. & J.E. Reynolds. 'The fishing fleet of Libya: preliminary results of the 1993 frame survey.' TBN No. 16, Oct. 1994. (En)

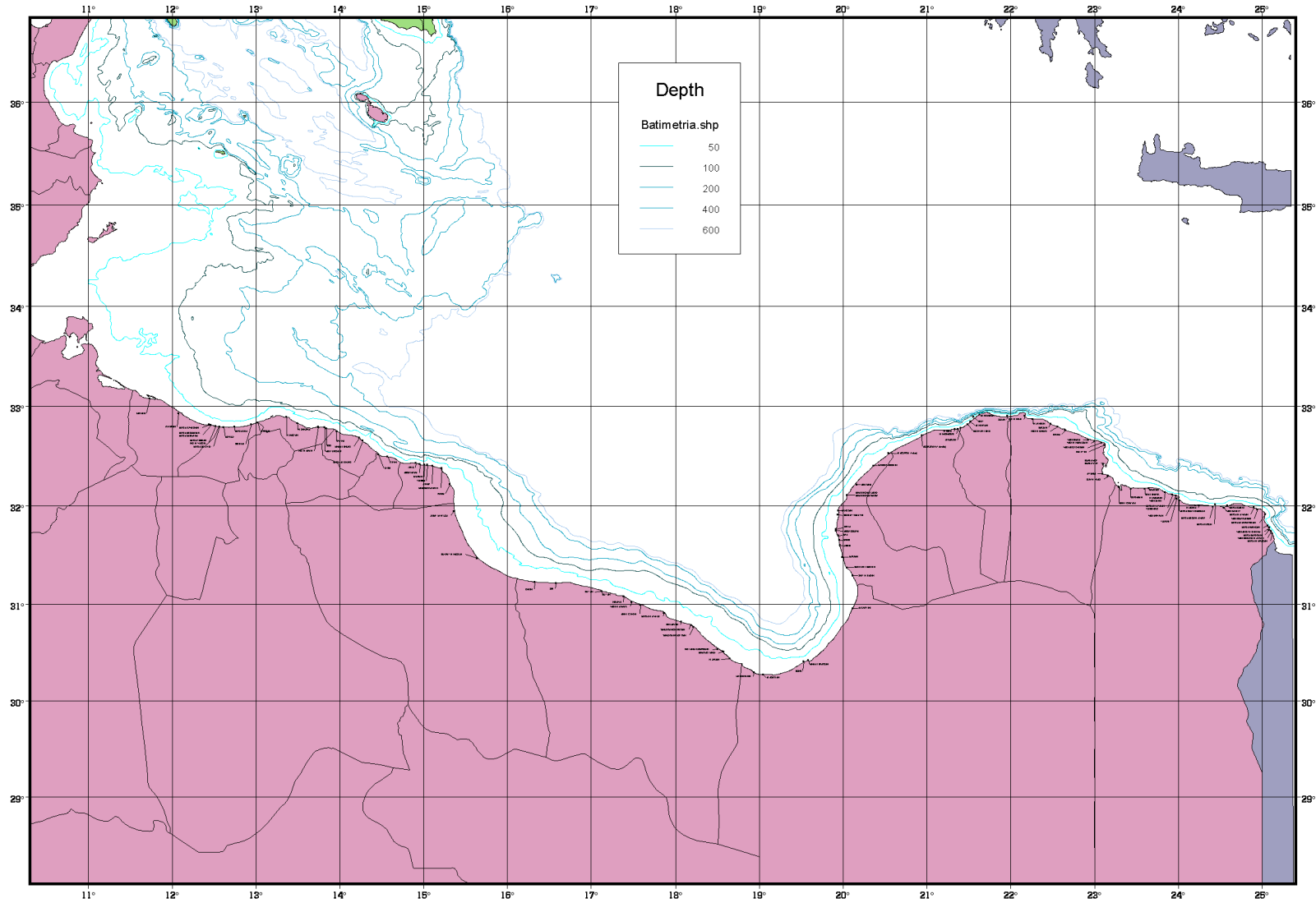


Figure 1 Libya map

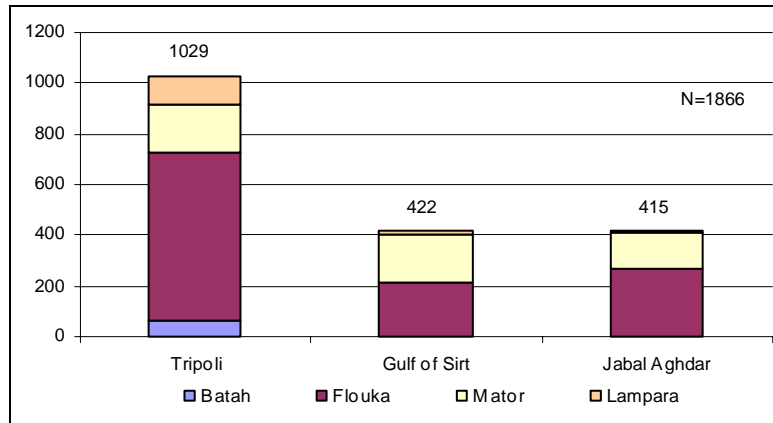


Figure 2 Number and type of fishing craft in the three regions

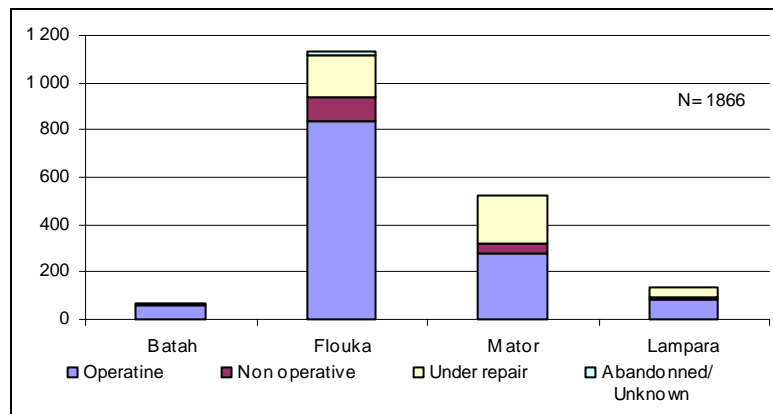


Figure 3 Fishing craft by type and activity in the three regions

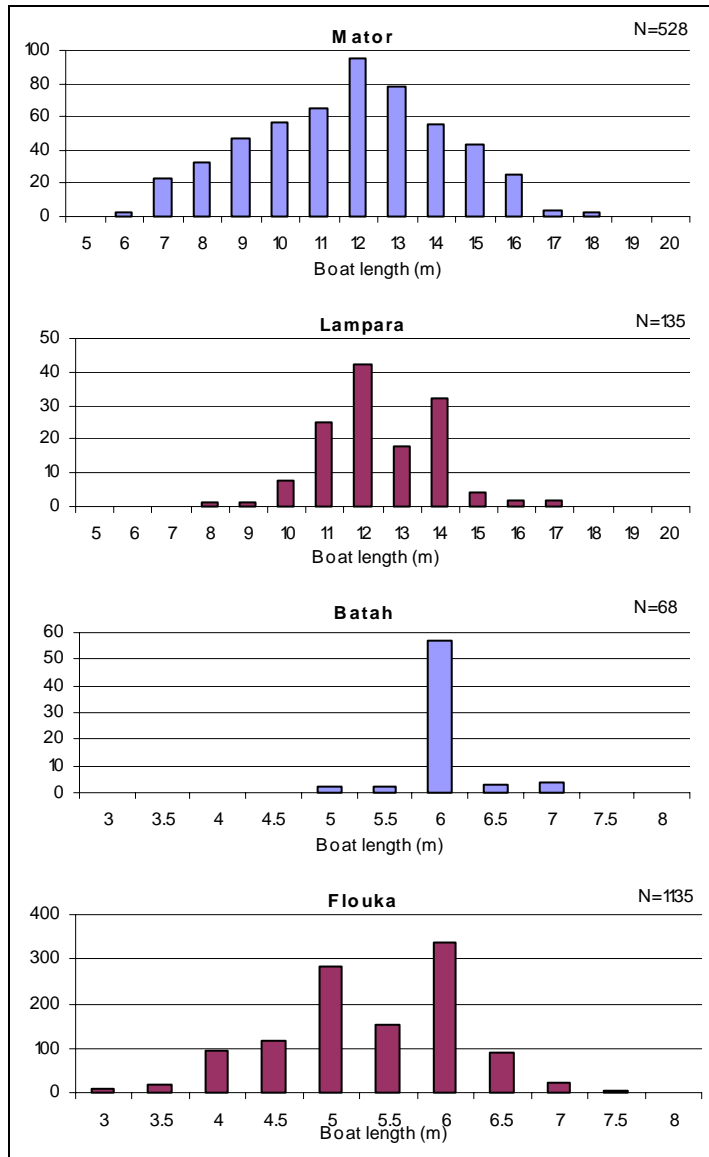


Figure 4 Distribution boat length by type of fishing crafts

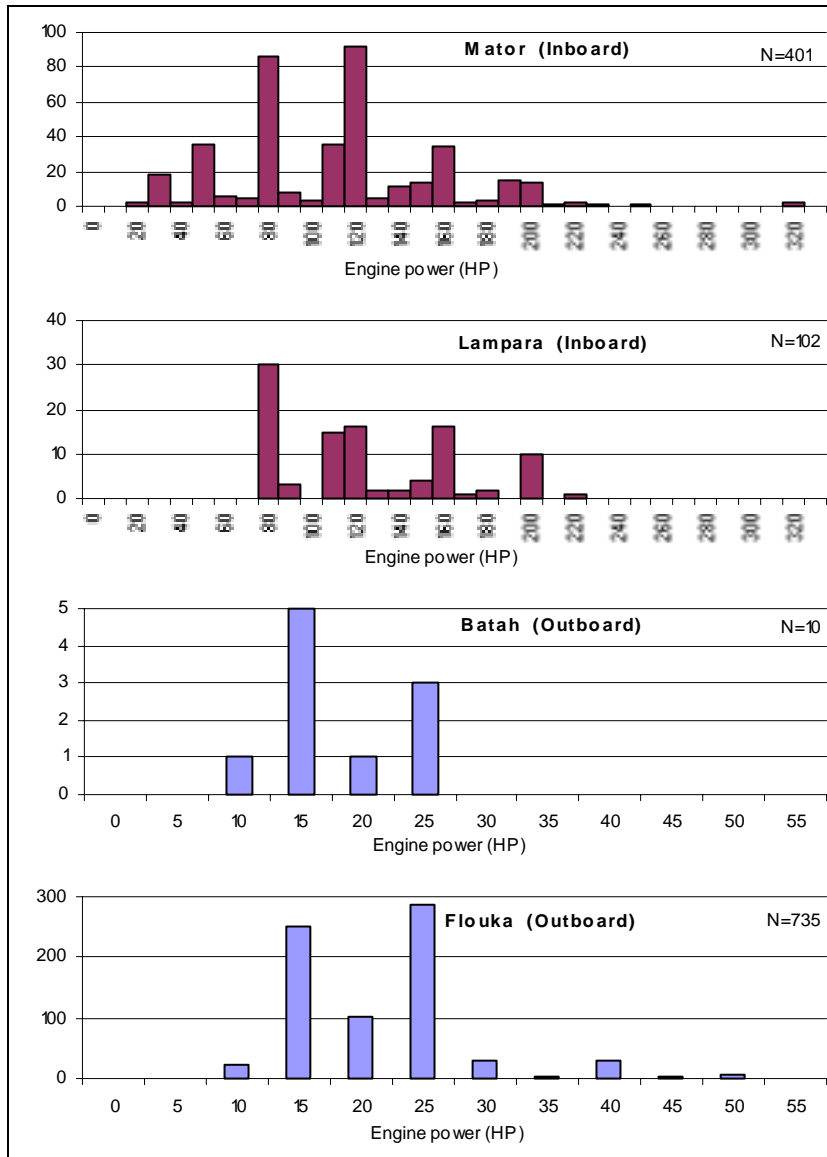


Figure 5 Distribution of engine power by type of fishing craft

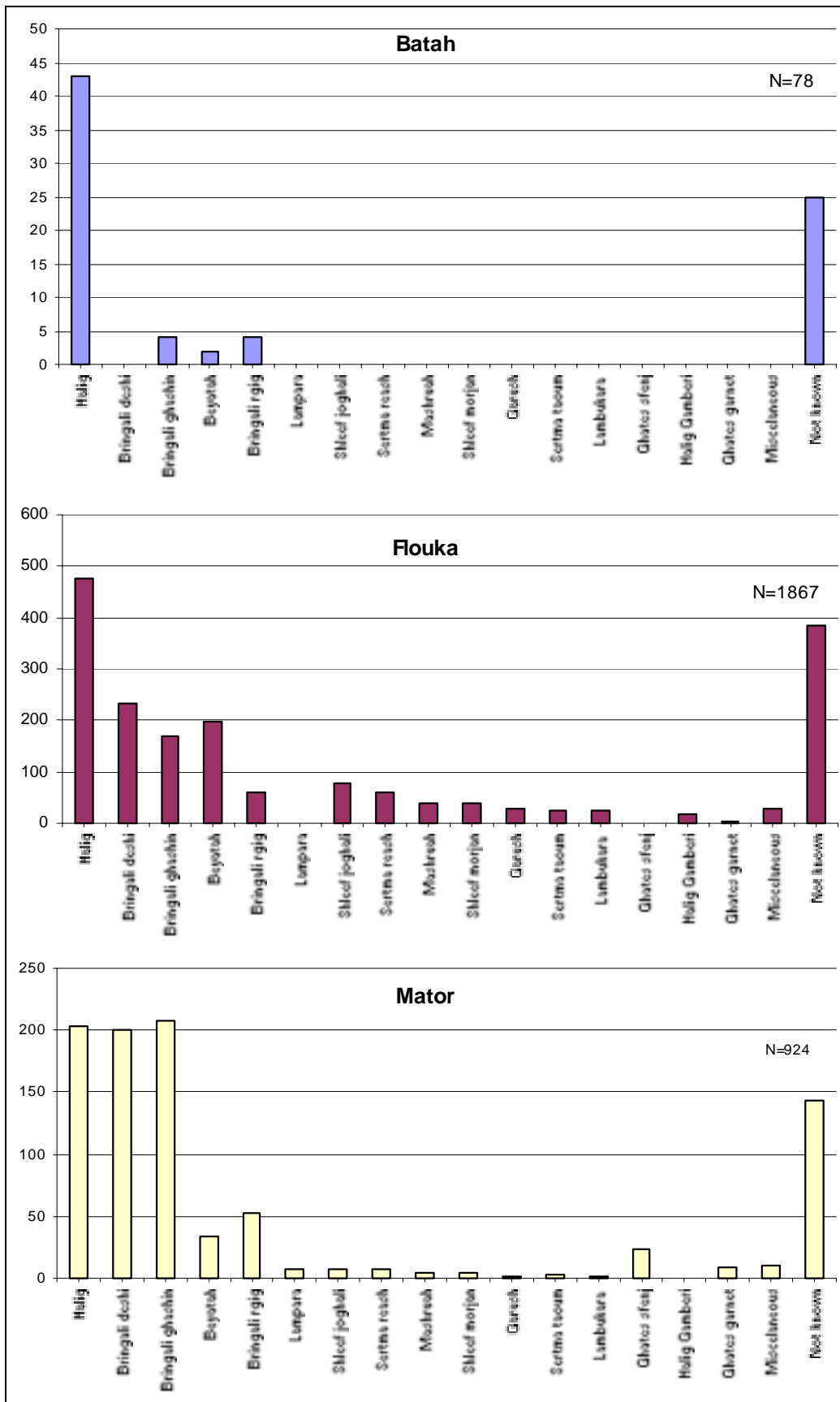


Figure 6 Occurrence of use of fishing gear by type of boat

APPENDIX I SURVEY FORMS

COPEMEDArt FiMed Libya FS2000 Metier form

Metier Code					Port name	
Gear Local name					Port code	
Species 1 T/A					Date	
2 T/A						
3 T/A						
4 T/A						Lat
5 T/A						
6 T/A						Lon
7 T/A						
Nb. boats fishermen					Photo	
Fishing season	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12		Road access Y N
Fishing Zone Description						Cold room Y N
Depth Min. Max.	F	F	F	F		Market Y N
Distance Left Right	km	km	km	km		Infrastructures Y N
						Other activities Y N
					Port authority Y N	

FLOUKA /BATAH

Place: _____ Interview Serial number: _____ Date: _____

Enumerator: _____

Place code: _____

1. Fishing vessel characteristics			
1.1	<u>Matriculation or registration number</u>	No number	written on boat
1.2	<u>Registration office</u>		list 3 write name
1.3	<u>Flag</u>	Libya Other: _____	list 4
1.4	Registration date		date of issuing 1.1
1.5	<u>Maritime registration number</u>		
1.6	<u>Name of fishing vessel</u>	No name	written on boat
1.7	<u>Type of fishing vessel</u>	Flouka Batah Other _____	list 5
1.8	<u>Operational status</u>	Operative Non operat. Repair Abandoned Other DK (list 6)	
1.9	<u>Base port of vessel (permanent)</u>		list 2
1.10	Remarks Informant Last time at sea	Owner Fisherman Non fisherman Nobody <1week <month ___month >1year DK	

2. Fishing authorisation/licence			
2.1.1	<u>Type of fishing licence</u>	Fishing licence, leisure Other _____	list 7
2.1.2	<u>Identification written on the document</u>		written on document
2.1.3	Date of issue		written on document
2.1.4	<u>Issuing office</u>		list 3
2.5	Remarks		

10. Fishing gear.

		Gear code	Unit of gear	nb of units
		list 8	list 17	
10.1.01	Gear 1		Net Hooks Lines FAD Pots _____	
10.1.02	Gear 2		Net Hooks Lines FAD Pots _____	
10.1.03	Gear 3		Net Hooks Lines FAD Pots _____	
10.1.04	Gear 4		Net Hooks Lines FAD Pots _____	
10.1.05	Gear 5		Net Hooks Lines FAD Pots _____	
10.1.06	Gear 6		Net Hooks Lines FAD Pots _____	
10.2	Remarks	Gear	Gear Present GOB No Gear On Board NGOB	

3. Structural characteristics of boat			
3.1	Overall length		measure boat
3.4 & 5	Place of construction Country	Libya Tunisia Egypt Malta Italy Russia	list 4
3.8	Material used for the hull	Wood Fiberglass Aluminium	list 9
3.12	Remarks		

4. Engine			
4.x.1	Inboard / Outboard	Outboard	
4.x.3	Engine manufacturer Power HP	Not present _____ HP_____	Brand name
4.x.5	Country of manufacturer	Japan Korea Italy USA UK Other_____	list 4
	Navigation equipment	No GPS Sounder Other:_____	list 11

7. Ownership / Crew			
7.1.1	Type of company	Private Other code_____	list 14
7.2.2	Operated by	Owner Skipper Unknown	
8.1,2,3	Number of full time fishermen		

9. Home port / Operative port			
9.1	Present base port		list 2
9.2.1	Last year 1 st port period		list 2 ex 0607= june-july
9.2.2	2 nd port period		list 2 ex 0607= june-july
9.3	Remarks		

14. Safety equipment			
14.1	Nb of life belts & jackets		

15. General remarks	
15.1	Remarks

MATOR / LAMPARA / JARAFAT

Place: _____ Interview Serial number: _____ Date: _____

Enumerator: _____

Place code: _____

1. Fishing vessel characteristics			
1.1	Matriculation or registration number	No number	written on boat
1.2	Registration office		list 3 write name
1.3	Flag	Libya Other: _____	list 4
1.4	Registration date		date of issuing 1.1
1.5	Maritime registration number	No number	same number as 1.1
1.6	Name of fishing vessel		written on boat
1.7	Type of fishing vessel	Mator Lampara Jarafat Purse seiner Tuna Longliner Other _____	list 5
1.8	Operational status	Operative Non operat. Repair Abandoned Other DK	(list 6)
1.9	Base port of vessel (permanent)		list 2
1.10	Remarks Informant Last time at sea	Owner Fisherman Non fisherman Nobody <1week <month ___month >1year DK	

2. Fishing authorisation/licence			
2.1.1	Type of fishing licence	Fishing licence Net Lampara Bringali trawl Other _____	list 7
2.1.2	Identification written on the document		written on document
2.1.3	Date of issue		written on document
2.1.4	Issuing office		list 3
2.3.1	Auxiliary fishing units	Yes No	
2.3.2	Number of auxiliary fishing units		total nb of auxiliary boats
2.3.3	Number of auxiliary units with lights		how many with light
2.4	Fishing with skin diver	Yes No	

10. Fishing gear

		Gear code list 8	Unit of gear list 17	nb of units
10.1.01	Gear 1		Net Hooks Lines FAD Pots _____	
10.1.02	Gear 2		Net Hooks Lines FAD Pots _____	
10.1.03	Gear 3		Net Hooks Lines FAD Pots _____	
10.1.04	Gear 4		Net Hooks Lines FAD Pots _____	
10.1.05	Gear 5		Net Hooks Lines FAD Pots _____	
10.1.06	Gear 6		Net Hooks Lines FAD Pots _____	
10.2	Remarks	Gear	Gear Present GOB No Gear On Board NGOB	

3. Structural characteristics of vessel			
3.1	<u>Overall length</u>		measure boat
3.2	Width		
3.3	Height		
3.4 &5	Place of construction Country	Libya Tunisia Egypt Malta Italy Greece	Other _____ list 4
3.6	Year of construction		
3.7	Shipyard where constructed		
3.8	Material used for the hull	Wood Fiberglass Steel	Other _____ list 9
3.9	Year of entry in fishery		
3.10	<u>GRT Gross Registerd Tonnage</u>		
3.11	NRT Net Registerd Tonnage		
3.12	Remarks		

4. Engine			
4.x.1	<u>Inboard / Outboard</u>	Inboard	(1) inboard (2) outboard
4.x.2	Type of propulsion	Diesel Oth_____ Diesel Oth_____	list 10
4.x.3	Engine manufacturer		Brand name
4.x.5	Country of manufacturer		list 4
4.x.6	Year of manufacture		
4.x.7	Power HP		
4.4	Remarks		

5. Electronic equipment			
5.1.1	Navigation equip. 1	Year	list 11 year
5.1.2	Navigation equip. 2	Year	list 11 year
5.1.3	Navigation equip. 3	Year	list 11 year
5.1.4	Navigation equip. other	Year	specify year
5.2.1	Radio VHF	Year	1=yes 0=No year
5.2.2	Radio Téléphone	Year	1=yes 0=No year
5.2.3	Cellular phone	Year	1=yes 0=No year
5.2.4	Communication app. other	Year	Specify year
5.2.5	Radio Call Sign		
5.3.1	Echo-sounder	Year	1=yes 0=No year
5.3.2	Sonar	Year	1=yes 0=No year
5.3.3	Net Sonde	Year	1=yes 0=No year
5.3.4	Fish finder other	Year	Specify year
5.4	Remarks		

6. Deck machinery			
6.1	Method of activating fishing gear	Mechanised Manual	1=mechanised 2=manual
6.2	Line winch number operated by	Mecanical, Hydaulic, Electrical	number list 13
6.3	Net winch number operated by	Mecanical, Hydaulic, Electrical	number list 13
6.4	Trammel winch number operated by	Mecanical, Hydaulic, Electrical	number list 13
6.5	Power block number operated by	Mecanical, Hydaulic, Electrical	number list 13
6.6	Other number operated by	Mecanical, Hydaulic, Electrical	specify number list 13
6.7	Other number operated by	Mecanical, Hydaulic, Electrical	number list 13
6.8	Remarks		

7. Ownership			
7.1.1	Type of company	Private Sherika Tasharukia Other _____	list 14
7.1.2	Name of company		
7.1.3	Year company was established		
7.1.4,5,6	Adress of company		
7.2.1	Name of vessel owner nb co-owners		Name number
7.2.2	Operated by	Owner Skipper	1=owner 2=Skipper
7.2.4,5,6	Adress of owner		
7.3	Remarks		

8. Crew			
8.1,2,3	number min, max, full time		
8.3.	Remarks		

9. Home port / Operative port			
9.1	Present base port		list 2
9.2.1	Last year 1 st port period		list 2 ex 0607= june-july
9.2.2	2 nd port period		list 2 ex 0607= june-july
9.2.3	3 rd port period		list 2 ex 0607= june-july
9.2.4	4 th port period		list 2 ex 0607= june-july
9.2.5	5 th port period		list 2 ex 0607= june-july
9.3	Remarks		

12. Equipment for preserving fish				
12.1.1&2	Fish hold with ice	Capacity		m ³
12.2.1&2	Refrigerated fish hold	Capacity		m ³
12.2.3	Refrigeration temperature			°C
12.3.1	Plant for refrigerated sea water			
12.4.1&2	Hold for live fish	Capacity		m ³
12.5.1&2	Other	Capacity		m ³
12.6	Remarks			

13. Other equipment			
13.3.1	Lights for fishing		
13.3.2	Number of lights		
13.3.3	Power of each lights		
13.4	Remarks		

14. Safety equipment			
14.1	Nb of life belts & jackets		
14.2	Nb of lifeboats		
14.3	Nb of flares		
14.4	Nb of fire equipment		
14.5	Other safety equipment		Specify
14.6			

15. General remarks	
15.1	Remarks

APPENDIX II CODE LISTS FOR LIBYA FS2000

LIST 2 Base ports/places of interview (Places_all_Libya)

ArtFiMed - FS93 Port Code equivalent

IdPort	FS93	Port
FAR	10100	Farwah
ZUW	10110	Zuwarah
MZW	10120	Marsa zuwaghah
MAB	10130	Marsa aboubakar
SBR	10140	Marsa sabratha
RWS	10150	Ras el wassif
MTB	10160	Marsa tobbah
MSZ	10170	Marsa sidi zeid
MTR	10180	Motrud
MDL	10190	Marsa dila
SBL	10200	Sidi blal
JNZ	10210	Janzour
GRD	10220	Ghardagah
RGT	10230	Regata
MSI	10240	Medina siahiah
DTP	10250	Special dt place
GAS	10260	Gasriah
GRN	10270	Gharnatah
BZR	10280	Bazrah
ZRG	10290	Ain zarga
BAB	10300	Bab el bahar
SSB	10310	Sidi shaab
END	10320	Enadi el bahri
SMJ	10330	Sidi mahjub
SGL	10340	Sagalia
MGT	10350	El magtah
SJR	10360	El shejera
RAM	10370	Ras Laman
WTU	10380	Wadi turghut
BSI	10390	Bsis
SWE	10400	Swenia
KHM	10410	Mina al khums
MKH	10420	Marsa al khums
TUE	10430	Tuebia
ZLI	20100	Zliten
ZRE	20110	Zreg
BFM	20120	Bou fatma
DZR	20130	Dzairah
TBB	20140	Toubba
JNT	20150	Jannat
JMA	20160	Jabit el maltia
QSR	20170	Mina qasr ahmed
RUM	20180	Rumia
JME	20190	Jabiat merzuga
MRG	20192	El Merkeb
KH1	20194	El Khaouada 1
KH2	20196	El Khaouada 2

IdPort	FS93	Port
BUH	20200	Bueirat el hassun
CHE	20210	Chesh
SRT	20220	Sirt
SLT	20230	Sultan
HRW	20240	Harawa
WAH	20250	Wadi Lahmar
GDL	20260	Bou Sada
MWJ	20270	Marsa Laweija
BJW	20280	Ben jawad
YAG	20290	Yahudiyah gharbiyah
YAW	20300	Yahudiyah wastiyah
YAS	20305	Yahudiyah shargiyah
RLA	20310	Ras lanuf compound
LNF	20320	Mina ras lanuf
JER	20330	El jeriah
UMG	20340	Um gharaniq
AQA	20350	Junet el Gutaani
BIS	20360	Junet Attaliani
BRG	20370	Mina al braygah
AZZ	30100	Azzuaytina
SBD	30110	Shat el badin
KKA	30120	Kashem el kabesh
MUR	30130	Murrah
HBB	30140	Habib
GMN	30150	Gminis
BAT	30160	Bata
BDR	30170	Bou douara
NAY	30180	Nayl
NAG	30190	Nakhlat
MRE	30200	Mreissah
BSC	30210	Benghazi scout club
NMI	30220	Nadi el milahah
MBJ	30230	Mina benghazi jadid
MBK	30240	Mina benghazi kadim
AZI	30250	Ain ziana
MHS	30260	Mungar hossein
AGU	30270	Al aguriya (tokra)
ADD	30280	Addirsiyah (tolmeita)
OGL	30290	El ogla
MSH	30300	El mashaoub
JJR	30310	Jarjaruma
KKE	30320	Kashem el kelb
HNY	30330	Al haniyah
BST	30340	Best
HMM	30350	Al Hamamah
SUS	30360	Susah
HIL	30370	Ras el hilal

IdPort	FS93	Port
ATR	30380	Lathrun
KAR	30390	Karsah
NGH	30400	Nadi el ghous
DRN	30410	Derna
WKH	30420	Wadi khaliij
WHA	30430	Wadi el hamassah
WAD	30440	Wadi abou dhaban
WBA	30450	Wadi bou el aguig
ETT	30460	Ras ettin
JFR	30465	Jfarah
BBE	30470	Bumba east
BBW	30480	Bumba west
ATT	30490	Attimimi
OEF	30500	Oum el frais
GZL	30510	Ain ghazala
QDB	30520	Qardabah
BKT	30530	Bu al khatir
MRA	30540	Mrassas
WSH	30550	Wadi sahal2
MGR	30560	El magarin
BDS	30570	Abou douaissah
TBG	30580	Toubbeirg
MWD	30590	Marsa el awdah
WAR	30600	Wadi abdoul rasul
WMR	30610	Wadi mrerah
TBK	30620	Tubruk
MOE	30630	Marsa oum echaouch
AGL	30640	El ageila
MAA	30650	Marsa abou el afarit
WSA	30660	Wadi sahal
MGB	30670	Marsa gabes
MLK	30680	Marsa lucch
MWR	30690	Marsa el awrah
WOR	30700	Wadi oum rukbah
MMU	30710	Marsa al muraiyssah
MHR	30720	Marsa haregah
WAK	30730	Wadi abou el khalifa
MBA	30740	Marsa bardiyah
WOG	30750	Wadi oghung el anzah
MMR	30760	Marsa el mregah

**LIST 1 Enumerator
(rilevatori)**

01	Michel Lamboeuf
02	Abdallah ben Abdallah
03	Ahmed Amer
04	Hassan Ghebli
05	Ali Fituri
06	Esmail Shugman
07	Hesham Ghmati
08	Ehab El-Shrif
09	Akram Turki
10	Ali El Ghushti

LIST 3 Registration Office

ZW	Zwarah
SA	Sabratah
ZA	Zawia
JA	Janzour/Sidi Blal
TR	Tripoli
GA	Garabulli
KM	Khoms
ZL	Zliten
MS	Missurata
SR	Sirt
AZ	Azzuitina
BG	Benghazi
BD	Al Bayda
DR	Derna
BB	Bumba
AT	Attimimi
TB	Tubruk

**LIST 4 Country/flag
(nazione)**

022	Albania
002	Algeria
003	Croatia
004	Cyprus
025	Denmark
005	Egypt
020	Egypt
006	France
024	Germany
007	Greece
008	Italy
016	Japan
017	Korea
009	Libya
010	Malta
021	Russia
011	Slovenia
012	Spain
023	Sweeden
001	Syria
013	Tunisia
014	Turkey
018	UK
019	USA
015	Yugoslavia
998	z-Other
999	z-Unknown

**LIST 5 Type of fishing vessel
(tipo_imbarcazione)**

01	Batah
02	Flouka
03	Mator
04	Lampara
05	Trawler
06	Purse seiner
07	Tuna longliner
08	Tonnara boat
98	Other
99	Unknown

**LIST 6 Operational status
(situazione_operativa)**

1	Operative
2	Non operative
3	Under repair
4	Abandoned
8	Other
9	Unknown

**LIST 7 Fishing Licence and documentation
(documento_autorizzazione)**

100	Fishing Licence
200	Fishing permit
250	Leisure
310	Trawl/Purse Seine
320	Tuna Longline
330	Nets, Lines & Pots
340	Lampara
350	Bringali
360	Sponge
370	Tonnara
800	Other
900	Unknown

**LIST 9 Material of construction of the hull
(material_construzione)**

01	Wood
02	Marine plywood
03	Aluminium
04	Iron/Steel
05	Fibreglass
06	Rubber
07	Cement
98	Other
99	Unknown

**LIST 10 Type of propulsion
(tipo_propulsione)**

1	Diesel
2	Petrol
3	Electronic diesel
8	Other
9	Uknown

LIST 8 Fishing gear (attrezzi_pesca)

0111	Lampara	One boat operated Purse Seine
0121	Lambukara	Seine without purse line
0713	Beyatah 50 mm	Set Gillnet
0714	Mashruah 40 mm	Set Gillnet
0715	Bdan Kahla 28 mm	Set Gillnet
0716	Bdan Mughzel 18 mm	Set Gillnet
0719	Bdan Yebra 16 mm	Set Gillnet
0717	Bdan Sardinah 24 mm	Set Gillnet
0718	Kellabia 150 mm	Set Gillnet
0720	Sayeb 50 mm	Driftnets
0731	Rami	Encircling Trammel net
0732	Tahlig 27 mm	Encircling Gillnet
0750	Halig, Mubaten, Chabakoni, Tremalli	Trammel net
0751	Halig Gamberi	Trammel net
0824	Garush	Pots
0911	Shleef morjan #10-12	Handlines and Pole-lines (hand)
0912	Shleef joghali # 5-7	Handlines and Pole-lines (hand)
0914	Gorbara	Handlines and Pole-lines (hand)
0933	Bringali ghashin # 4-5-6	Set Longline
0934	Bringali deshi # 7-8-9	Set Longline
0935	Bringali rgig # 10-11-12	Set Longline
0936	Bringali kelb # 01	Set longline
0941	Bringali ayam sayeb # 01	Drifting Longline
0962	Sertma taoum #4-6	Trolling Line
0963	Sertma reash #9-12	Trolling Line
0964	Sertma baletta spoon kashik lussafa	Trolling Line
1011	Ghates garnet	Free diving
1012	Ghates farouj	Scuba or compressor
1013	Ghates sfenj	Scuba or compressor
2001	Jalatina	Other Gear
9900	GEAR NOT KNOWN OR NOT SPECIFIED	

LIST 11 Navigational equipment (apparechio_navigazione)

01	No navigation equipment
05	Decca
06	GPS (Satellite navigation)
07	Radar
09	Automatic pilot
11	Gyrocompass
12	Fax
98	Other
99	Unknown

LIST 13 Winch (Verricello)

1	No present
2	Mechanical
3	Hydraulic
4	Electric
8	Other
9	Unknown

LIST 14 Type of fishing firm (impresa)

10	National
11	Nat Private = Khassa
12	Nat Industrial = Sherika
13	Nat Cooperative = Tasharukia
14	Nat Joint-stock comp
15	Nat Government
20	Foreign
21	For Private industrial
22	For Joint-stock company
23	Government
30	Mixed company
98	Other
99	Unknown

LIST 15 Operated by (tipo_operatore)

1	Owner
2	Operator
9	Unknown

LIST 16 Fishing Area (arre_pesca)

AGHD	Jebel Aghdar
KHAL	Khalij
TRIP	Tripoli
Z998	Other
Z999	Unknown

LIST 17 Fishing gear elementary unit (unita_elementare)

01	Piece of net
02	Hooks (Bringali)
03	Traps
04	FAD's (Matallah)
05	Pots (Jrar)
06	Lines (Shleef, Sertma, Gorbara)
98	Other type of unit

LIST 18 Groups of main species caught (gruppi_specie)

1	Small gregarious pelagic (e.g., anchovies, sardines, mackerel)
2	Large pelagic (e.g. tunas, amberjacks)
3	Demersal inshore species, mainly of hard sub-stratum (e.g., sea-bream)
4	Demersal offshore species, mainly of soft sub-stratum (e.g., codfish)
5	Sessile organisms (e.g., clams, mussels, warty venus)
6	Special fish, monospecies and similar (e.g., lobsters, red porgy)
7	Lampuki (Coryphaena hippurus)
8	Sharks
9	Unknown

APPENDIX III FISHES FROM LIBYA, COMMON AND SCIENTIFIC NAMES

Arabic name	Local name	FAO english name	Scientific name
أوسيف	Abucef	Swordfish	<i>Xiphyas gladius</i>
أبوخضير	Abukheder	Brown wrasse	<i>Labrus merula</i>
أبوشوكة	Abushoka	Piked dogfish	<i>Squalus acanthias</i>
أوراتا	Aurata	Gilthead seabream	<i>Sparus aurata</i>
بغله	Baghlah	Shi drum	<i>Umbrina cirrosa</i>
باقرو	Bagro	Common seabream	<i>Pagrus pagrus pagrus</i>
بلاميط يمانى	Balamet yamani	Narrow barred spanish mackerel	<i>Scomberomorus commerson</i>
بريمه	Barema	Greater amberjack	<i>Seriola dumerili</i> (< 1 kg)
بطاطا	Batata	Dusky spinefoot	<i>Siganus luridus</i>
بوقه	Bougah	Bogue	<i>Boops boops</i>
بقرة بحر	Bugrah bahar	Blue stingray	<i>Dasyatis pastinaca</i>
بورى	Buri	Mulet	Fam. Mugilidae
كالامار	Calamar	European squid	<i>Loligo vulgaris</i>
كوالى	Cawalli	Chub mackerel	<i>Scomber japonicus</i>
دندشى	Dendichi	Common dentex	<i>Dentex dentex</i>
دوث	Dooth	Golden grouper	<i>Epinephelus costae</i>
دوث يهودى	Dooth yahudi	Comb grouper	<i>Mycteroperca rubra</i>
فروج	Farouj	Duskt grouper	<i>Epinephelus guaza</i>
جمبرى كبير	Gamberi kabir	Caramote prawn	<i>Penaeus keraturus</i>
قراقوز	Garagous	White seabream	<i>Diplodus sargus</i>
قراقوز موشم	Garagous mwashim	Commun two-banded seabream	<i>Diplodus vulgaris</i>
قرنيط	Garnet	Common octopus	<i>Octopus vulgaris</i>
قاروص	Garous	European seabass	<i>Dicentrarchus labrax</i>
قزلة	Ghazla	Parrotfish	<i>Sparisoma cretense</i>
غراب	Ghrab	Brown meagre	<i>Sciena umbra</i>
قرنقو	Grango	European conger	<i>Conger conger</i>
حلوڤ	Hallouf	Grey Triggerfish	<i>Balistes carolinensis</i>
حمرائة	Homrayah	Common dentex	<i>Dentex dentex</i>
جغالى	Joghali	Pink dentex	<i>Dentex gibbosus</i>
كحله	Kahla	Saddled seabream	<i>Oblada melanura</i>
كلب	Kelb	Shark	Fam. Carcharhinidae
خنزيره بيضاء	Khanzirah beida	Dogtooth grouper	<i>Epinephelus caninus</i>
خنزيره سوداء	Khanzirah soda	Haifa grouper	<i>Epinephelus haifensis</i>
لالاجه	Lalaja	Pilot fish	<i>Naucrates ductor</i>
لمبوكه	Lambuka	Common dolphinfish	<i>Coryphaena hippurus</i>
مغرس	Magres	Blue fish	<i>Pomatomus saltatrix</i>
محراث	Mahrath	Common guitarfish	<i>Rhinobathos sp</i>
منكوس	Mankus	Striped seabream	<i>Lithognathus mormyrus</i>
ماتسيتى	Matseti	Buttlet tuna	<i>Auxis rochei</i>
ماتسولا	Matsola	Smoothhound	<i>Mustellus mustellus.</i>
منانى	Mennani	White grouper	<i>Epinephelus aeneus</i>
مخطط	Mghatat	Atlantic bonito	<i>Sarda sarda</i>
مرجان	Morjan	Common pandora	<i>Pagellus erythrinus</i>
مغزل	Mughzel	Barracuda	<i>Sphyraena sp</i>
مغزل أصفر	Mughzel asfar	Yellowmouth barracuda	<i>Sphyraena viridensis</i>
مغزل شاوش	Mughzel shawish	European barracuda	<i>Sphyraena sphyraena</i>
رزام	Rzam	little tuny	<i>Euthynus alleteratus</i>
سردينه	Sardine	Round sardine	<i>Sardinella aurita</i>
ساورو أصفر	Sawro asfar	False scad	<i>Caranx rhoncus</i>

Arabic name	Local name	FAO english name	Scientific name
صاورو أمبريالي	Sawro imbriali	Blue runner	<i>Caranx crysos</i>
صبارص	Sbarus	Annular seabream	<i>Diplodus annularis</i>
سبييه	Sebia	Cuttlefish	<i>Sepia officinalis</i>
سبته	Semta	Silver scabbardfish	<i>Lepidopus caudatus</i>
سران	Serran	Comber	<i>Serranus cabrilla</i>
سفن	Sfen	Angle shark	<i>Squatina squatina</i>
أسفنج	Sfenj	Sponge	<i>Hippospongia communis</i>
أشكالا	Shcala	Mediterranean locust lobster	<i>Scylliarides latus</i>
شكورفو	Shcorfo	Scorpionfish	<i>Scorpaena sp</i>
شفشه	Shefshah	Dusky spinefoot	<i>Siganus luridus</i>
شليه	Shelba	Salema	<i>Sarpa salpa</i>
شوله	Sholah	Greater amberjack	<i>Seriola dumerili (> 1 kg)</i>
إستريا	Strelia	Leerfish	<i>Lichia amia</i>
تنوت	Tannut	Black seabream	<i>Spondyliosoma cantharus</i>
تنتون	Tantun	Comon dentex	<i>Dentex dentex</i>
طراجه	Trajna	Weever	<i>Trachinus sp</i>
تريليا حمرة	Trelia hamra	Striped red mullet	<i>Mullus surmuletus</i>
زمريه	Zemrina	Mediterranean moray	<i>Murena helena</i>
زريقه	Zrega	Picarel	<i>Spicara spp</i>
زرقايه	Zurgaia	Mako	<i>Fam. Lamnidae</i>

APPENDIX IV PORTS AND LANDING SITES IN LIBYA

Port	Latitude	Longitude	Port	Latitude	Longitude
FARWAH	33°04,736N	11°44,152E	HABIB	31°34,176N	19°58,380E
ZUWARAH	32°55,275N	12°07,194E	GMINIS (El Nugtah)	31°38,974N	19°57,429E
MARSA ZUWAGHAH	32°48,820N	12°26,702E	BATA	31°42,418N	19°56,335E
MARSA ABOUBAKAR	32°48,764N	12°27,882E	BOU DOUARA	31°43,302N	19°55,754E
MARSA SABRATHA	32°48,298N	12°28,273E	NAYL	31°44,403N	19°55,555E
RAS EL WASSIF	32°48,129N	12°31,380E	NAKHLAT (Shaeter)	31°49,211N	19°55,809E
MARSA TOBBAH	32°48,000N	12°32,179E	TERRIA	31°53,810N	19°56,814E
MARSA SIDI ZEID	32°47,702N	12°34,452E	MREISSAH	31°57,060N	19°56,689E
MOTRUD	32°47,653N	12°36,824E	BENGHAZI SCOUT CLUB	32°05,237N	20°02,753E
MARSA DILA	32°47,576N	12°44,877E	NADI EL MILAHAH	32°05,404N	20°02,966E
SIDI BLAL	32°49,396N	12°57,308E	MINA BENGHAZI JADID	32°06,227N	20°02,895E
JANZOUR	32°50,560N	13°01,398E	MINA BENGHAZI KADIM	32°06,299N	20°03,288E
GHARDAGAH	32°51,016N	13°02,615E	AIN ZIANA	32°12,713N	20°09,326E
REGATA	32°51,266N	13°03,384E	MUNGAR HOSSEIN	32°24,400N	20°21,800E
MEDINA SIAHIAH	32°51,421N	13°03,923E	AL AGURIYA (Tokra)	32°32,054N	20°33,400E
SPECIAL DT PLACE	32°51,536N	13°04,389E	ADDIRSIYAH (Tolmeita)	32°42,840N	20°56,796E
GASRIAH	32°52,540N	13°06,900E	EL OGLA	32°46,402N	21°20,716E
GHARNATAH	32°52,907N	13°08,224E	EL MASHAOUB	32°46,732N	21°22,649E
BAZRAH	32°52,931N	13°09,076E	JARJARUMA	32°46,890N	21°24,316E
AIN ZARGA	32°53,653N	13°09,794E	KHASHHEM EL KELB	32°49,550N	21°29,712E
BAB EL BAHAR	32°54,052N	13°10,629E	AL HANIYAH	32°50,205N	21°30,803E
SIDI SHAAB	32°53,755N	13°11,629E	BEST	32°52,533N	21°33,923E
ENADI EL BAHRI	32°54,597N	13°14,084E	AL HAMAMAH	32°55,065N	21°37,548E
SIDI MAHJUB	32°54,637N	13°14,382E	SUSAH	32°54,212N	21°57,853E
SAGALIA	32°54,556N	13°14,745E	RAS EL HILAL	32°54,741N	22°10,239E
EL MAGTAH	32°53,739N	13°22,547E	LATHRUN	32°52,375N	22°16,057E
EL SHEJERA	32°49,133N	13°32,108E	KARSAH	32°49,423N	22°29,130E
RAS LAMAN	32°47,580N	13°44,831E	NADI EL GHOUS	32°48,123N	22°33,330E
WADI TURGHUT	32°47,360N	13°49,616E	DERNA	32°45,631N	22°39,203E
BSIS	32°44,508N	13°59,643E	WADI KHALIJ (Khabtah)	32°40,600N	22°55,296E
SWENIA	32°42,654N	14°09,366E	WADI LHAMASSAH	32°38,943N	22°59,878E
MINA AL KHUMS	32°40,687N	14°14,672E	WADI BOU DHABAN	32°39,100N	23°01,800E
MARSA AL KHUMS	32°39,297N	14°16,376E	WADI BOU LAGUIG	32°38,000N	23°06,100E
TUEBIA	32°31,979N	14°26,332E	RAS ETTIN	32°36,742N	23°07,525E
ZLITEN	32°29,951N	14°34,295E	JFARAH	32°29,259N	23°07,255E
ZREG	32°26,250N	14°54,158E	BUMBA EAST	32°30,500N	23°06,500E
BOU FATMA	32°25,516N	14°57,458E	BUMBA WEST	32°24,341N	23°05,966E
DZAIRAH	32°25,172N	15°00,330E	ATTIMIMI	32°20,819N	23°05,033E
TOUBBA	32°24,642N	15°02,372E	OUM EL FRAIS	32°16,000N	23°13,000E
JANNAT	32°24,651N	15°05,380E	AIN GHAZALA	32°11,259N	23°17,764E
JABIT EL MALTIA	32°23,555N	15°09,528E	GARDABAH	32°10,300N	23°26,300E
MINA QASR AHMED	32°22,455N	15°13,043E	BU AL KHATIR	32°10,400N	23°32,300E
RUMIA	32°16,068N	15°17,879E	MRASSAS	32°10,700N	23°39,200E
JABIAT MERZUGA	32°00,524N	15°21,180E	WADI SAHAL West	32°08,221N	23°50,119E
EL MERGEB	31°46,446N	15°26,349E	EL MAGARIN	32°08,100N	23°50,700E
EL KHAOUADA 1	31°32,016N	15°35,181E	ABOU DOUAISSAH	32°07,700N	23°51,800E
EL KHAOUADA 2	31°29,799N	15°36,792E	TOUBBEIRG	32°06,665N	23°55,760E
BUEIRAT EL HASSUN	31°26,284N	15°40,686E	MARSA EL AWDAAH	32°06,344N	23°55,954E
CHESH	31°14,505N	16°11,439E	WADI ABDOUL RASUL	32°06,008N	23°58,495E
SIRT	31°12,695N	16°35,017E	WADI MRERAH	32°05,980N	23°58,838E
SULTAN	31°08,182N	17°06,352E	TUBRUK	32°04,716N	23°58,444E
HARAWA	31°05,234N	17°17,618E	MARSA OUM ECHAOUCH	32°03,000N	24°01,000E
WADI LAHMAR (Tissain)	31°02,790N	17°26,303E	EL AGEILA	32°00,384N	24°15,006E
BOU SADA (Ain el Gendel)	30°59,553N	17°34,330E	MARSA BOU LAFARIT	31°59,300N	24°25,000E
MARSA LAWEIJA	30°54,688N	17°52,006E	WADI SAHAL East	31°58,770N	24°32,810E
BEN JAWAD	30°48,897N	18°04,350E	MARSA GABES	31°59,500N	24°35,200E
YAHUDIYAH GHARBIYAH	30°46,900N	18°11,500E	MARSA LUCCH	32°01,044N	24°45,809E
YAHUDIYAH WASTIYAH	30°45,800N	18°13,300E	MARSA LAWRAH	31°58,500N	24°54,800E
YAHUDIYAH SHARGIYAH	30°44,117N	18°14,984E	WADI OUM RUKBAH	31°58,300N	24°57,000E
RAS LANUF COMPOUND	30°32,100N	18°30,400E	MARSA AL MURAIYSSAH	31°54,600N	25°02,200E
MINA RAS LANUF	30°30,251N	18°34,181E	MARSA HAREGAH	31°48,000N	25°03,900E
EL JERIAH	30°23,805N	18°42,885E	WADI ABOU EL KHALIFA	31°46,500N	25°05,200E
UM GHARANIQ (Jabal Khash)	30°17,294N	18°56,443E	MARSA BURDIYAH	31°45,225N	25°05,448E
JUNET EL GUTAANI (Arbatash)	30°16,122N	19°03,146E	WADI OHUNG EL ANZAH	31°44,000N	25°07,200E
JUNET ATTALIANI (Bishr)	30°23,251N	19°31,059E	MARSA EL MREGAH	31°42,700N	25°07,500E
MINA AL BRAYGAH	30°25,000N	19°35,000E			
AZZUAYTINA	30°56,992N	20°06,710E			
SHAT EL BADIN	31°11,944N	20°09,796E			
KHASHHEM EL KABESH	31°21,553N	20°03,353E			
MURRAH	31°28,515N	19°59,673E			

APPENDIX V COMBINATION OF GEAR USED

Nb	Boat type	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6
33	Batah	Halig					
2	Batah	Halig	Beyatah				
4	Batah	Halig	Bringali khashin				
4	Batah	Halig	Bringali rgig				
25	Batah	Unknown/unspec					
25	Flouka	Beyatah					
1	Flouka	Beyatah	Lambukara				
1	Flouka	Beyatah	Lambukara	Bringali khashin	Bringali deshi		
2	Flouka	Beyatah	Mashruah				
1	Flouka	Beyatah	Mashruah	Bringali khashin	Bringali deshi		
3	Flouka	Beyatah	Mashruah	Bringali deshi			
1	Flouka	Beyatah	Mashruah	Bringali deshi	Shleef Joghali		
1	Flouka	Beyatah	Mashruah	Sertma reash			
1	Flouka	Beyatah	Bdan Kahla				
25	Flouka	Beyatah	Halig				
1	Flouka	Beyatah	Halig	Mashruah			
1	Flouka	Beyatah	Halig	Halig Gamberi	Bringali khashin	Bringali rgig	
1	Flouka	Beyatah	Halig	Bringali khashin	Bringali khashin		
2	Flouka	Beyatah	Halig	Bringali khashin	Bringali deshi		
1	Flouka	Beyatah	Halig	Bringali khashin	Bringali rgig		
11	Flouka	Beyatah	Bringali khashin				
2	Flouka	Beyatah	Bringali khashin	Beyatah			
2	Flouka	Beyatah	Bringali khashin	Bringali deshi			
1	Flouka	Beyatah	Bringali khashin	Bringali deshi	Bringali rgig	Lambukara	
1	Flouka	Beyatah	Bringali khashin	Bringali rgig			
1	Flouka	Beyatah	Bringali deshi	Bringali khashin			
1	Flouka	Beyatah	Bringali rgig				
1	Flouka	Beyatah	Sertma taoum	Bringali khashin			
6	Flouka	Mashruah					
1	Flouka	Mashruah	Beyatah	Bdan Mughzel			
1	Flouka	Mashruah	Bdan Kahla	Lambukara			
1	Flouka	Mashruah	Tahlig				
1	Flouka	Mashruah	Halig	Lambukara			
1	Flouka	Mashruah	Halig	Bringali khashin			
1	Flouka	Mashruah	Ghates garnet	Bringali khashin	Mashruah		
1	Flouka	Bdan Kahla	Beyatah	Lambukara			
1	Flouka	Bdan Kahla	Bringali khashin	Bringali deshi			
1	Flouka	Kellabia	Halig	Bringali khashin	Bringali deshi	Bringali rgig	
1	Flouka	Kellabia	Halig	Bringali khashin	Bringali rgig	Bringali deshi	
1	Flouka	Kellabia	Halig	Sertma taoum			
1	Flouka	Kellabia	Bringali khashin	Bringali rgig			
1	Flouka	Rami	Sertma reash				
1	Flouka	Tahlig					
134	Flouka	Halig					
1	Flouka	Halig	Lambukara	Beyatah			
1	Flouka	Halig	Lambukara	Beyatah	Bringali khashin		
54	Flouka	Halig	Beyatah				
6	Flouka	Halig	Beyatah	Lambukara			
1	Flouka	Halig	Beyatah	Lambukara	Bringali deshi	Sayeb	
5	Flouka	Halig	Beyatah	Mashruah	Bringali khashin	Bringali deshi	
1	Flouka	Halig	Beyatah	Shleef Joghali			
4	Flouka	Halig	Beyatah	Bringali khashin			
2	Flouka	Halig	Beyatah	Bringali khashin	Bringali deshi		
1	Flouka	Halig	Beyatah	Bringali khashin	Bringali deshi	Bringali rgig	
2	Flouka	Halig	Beyatah	Bringali khashin	Bringali rgig		
1	Flouka	Halig	Beyatah	Bringali khashin	Sertma taoum		
8	Flouka	Halig	Beyatah	Bringali deshi			

Nb	Boat type	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6
1	Flouka	Halig	Beyatah	Bringali rgig			
1	Flouka	Halig	Beyatah	Sertma reash			
6	Flouka	Halig	Mashruah				
1	Flouka	Halig	Mashruah				
1	Flouka	Halig	Mashruah	Lambukara			
1	Flouka	Halig	Mashruah	Bringali deshi			
1	Flouka	Halig	Kellabia				
1	Flouka	Halig	Kellabia	Bringali khashin			
1	Flouka	Halig	Halig Gamberi	Lambukara			
5	Flouka	Halig	Halig Gamberi	Beyatah			
1	Flouka	Halig	Halig Gamberi	Beyatah	Bringali deshi		
1	Flouka	Halig	Halig Gamberi	Shleef Joghali	Lambukara		
1	Flouka	Halig	Halig Gamberi	Bringali rgig			
14	Flouka	Halig	Garush				
1	Flouka	Halig	Shleef morjan	Shleef Joghali			
1	Flouka	Halig	Shleef morjan	Sertma reash			
2	Flouka	Halig	Shleef Joghali				
1	Flouka	Halig	Shleef Joghali	Bringali deshi			
15	Flouka	Halig	Bringali khashin				
1	Flouka	Halig	Bringali khashin	Beyatah			
1	Flouka	Halig	Bringali khashin	Halig Gamberi			
2	Flouka	Halig	Bringali khashin	Garush			
8	Flouka	Halig	Bringali khashin	Bringali deshi			
1	Flouka	Halig	Bringali khashin	Bringali deshi	Lambukara		
2	Flouka	Halig	Bringali khashin	Bringali deshi	Halig Gamberi		
3	Flouka	Halig	Bringali khashin	Bringali deshi	Bringali rgig		
1	Flouka	Halig	Bringali khashin	Bringali deshi	Bringali rgig	Beyatah	
2	Flouka	Halig	Bringali khashin	Bringali rgig			
1	Flouka	Halig	Bringali khashin	Sertma taoum			
62	Flouka	Halig	Bringali deshi				
4	Flouka	Halig	Bringali deshi	Lambukara			
4	Flouka	Halig	Bringali deshi	Beyatah			
1	Flouka	Halig	Bringali deshi	Mashruah			
3	Flouka	Halig	Bringali deshi	Sayeb			
1	Flouka	Halig	Bringali deshi	Shleef morjan			
2	Flouka	Halig	Bringali deshi	Shleef morjan	Sertma reash		
1	Flouka	Halig	Bringali deshi	Bringali khashin			
5	Flouka	Halig	Bringali deshi	Bringali rgig			
1	Flouka	Halig	Bringali deshi	Bringali rgig	Halig Gamberi		
1	Flouka	Halig	Bringali deshi	Bringali rgig	Shleef Joghali		
1	Flouka	Halig	Bringali deshi	Sertma reash			
4	Flouka	Halig	Bringali rgig				
1	Flouka	Halig	Bringali rgig	Bringali deshi			
2	Flouka	Halig	Sertma taoum				
1	Flouka	Halig	Sertma taoum	Kellabia			
4	Flouka	Halig	Sertma reash				
1	Flouka	Halig Gamberi	Sayeb	Bringali khashin			
14	Flouka	Garush	Halig				
10	Flouka	Shleef morjan					
1	Flouka	Shleef morjan	Halig				
7	Flouka	Shleef morjan	Shleef Joghali				
1	Flouka	Shleef morjan	Bringali khashin				
1	Flouka	Shleef morjan	Bringali khashin	Bringali deshi			
1	Flouka	Shleef morjan	Bringali deshi				
1	Flouka	Shleef morjan	Sertma taoum				
1	Flouka	Shleef morjan	Sertma taoum	Sertma reash			
3	Flouka	Shleef morjan	Sertma reash				
22	Flouka	Shleef Joghali					
2	Flouka	Shleef Joghali	Halig				
1	Flouka	Shleef Joghali	Bringali khashin				
2	Flouka	Shleef Joghali	Bringali deshi				
1	Flouka	Shleef Joghali	Bringali rgig				
6	Flouka	Shleef Joghali	Sertma reash				

Nb	Boat type	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6
35	Flouka	Bringali khashin					
1	Flouka	Bringali khashin	Beyatah				
5	Flouka	Bringali khashin	Halig				
1	Flouka	Bringali khashin	Halig	Shleef Joghali			
1	Flouka	Bringali khashin	Shleef Joghali				
1	Flouka	Bringali khashin	Shleef Joghali	Halig			
1	Flouka	Bringali khashin	Shleef Joghali	Sertma reash	Mashruah		
12	Flouka	Bringali khashin	Bringali deshi				
2	Flouka	Bringali khashin	Bringali deshi	Halig			
12	Flouka	Bringali khashin	Bringali deshi	Bringali rgig			
1	Flouka	Bringali khashin	Bringali rgig	Sertma reash			
1	Flouka	Bringali khashin	Ghates garnet				
15	Flouka	Bringali deshi					
1	Flouka	Bringali deshi	Beyatah	Mashruah	Gorbara		
1	Flouka	Bringali deshi	Beyatah	Shleef morjan	Halig		
10	Flouka	Bringali deshi	Halig				
1	Flouka	Bringali deshi	Halig	Halig Gamberi	Shleef Joghali		
1	Flouka	Bringali deshi	Halig	Halig Gamberi	Shleef Joghali	Lambukara	
1	Flouka	Bringali deshi	Halig Gamberi				
1	Flouka	Bringali deshi	Shleef morjan	Shleef Joghali			
2	Flouka	Bringali deshi	Shleef morjan	Shleef Joghali	Halig		
1	Flouka	Bringali deshi	Shleef Joghali	Lambukara			
1	Flouka	Bringali deshi	Shleef Joghali	Halig			
1	Flouka	Bringali deshi	Shleef Joghali	Sertma taoum	Sertma baletta		
2	Flouka	Bringali deshi	Shleef Joghali	Sertma reash			
2	Flouka	Bringali deshi	Bringali khashin				
1	Flouka	Bringali deshi	Bringali khashin	Shleef Joghali			
6	Flouka	Bringali deshi	Bringali rgig				
4	Flouka	Bringali deshi	Sertma reash				
1	Flouka	Bringali deshi	Sertma reash	Shleef morjan			
4	Flouka	Bringali deshi	Sertma reash	Shleef Joghali			
1	Flouka	Bringali rgig					
1	Flouka	Bringali rgig	Shleef Joghali	Sertma reash			
1	Flouka	Bringali rgig	Bringali khashin				
2	Flouka	Bringali rgig	Bringali khashin	Bringali deshi			
2	Flouka	Bringali rgig	Bringali deshi				
1	Flouka	Bringali rgig	Bringali deshi	Sertma reash			
1	Flouka	Bringali rgig	Sertma reash				
5	Flouka	Sertma taoum					
1	Flouka	Sertma taoum	Bringali khashin				
1	Flouka	Sertma taoum	Bringali deshi				
2	Flouka	Sertma taoum	Sertma reash	Shleef morjan	Bringali deshi		
2	Flouka	Sertma taoum	Sertma reash	Sertma baletta			
1	Flouka	Sertma taoum	Sertma reash	Sertma baletta	Halig		
1	Flouka	Sertma taoum	Sertma baletta				
6	Flouka	Sertma reash					
1	Flouka	Sertma reash	Halig				
1	Flouka	Sertma reash	Shleef morjan				
7	Flouka	Sertma reash	Shleef Joghali				
1	Flouka	Sertma reash	Sertma taoum	Shleef morjan	Bringali deshi		
1	Flouka	Sertma reash	Sertma baletta				
1	Flouka	Sertma baletta	Sertma reash	Sertma taoum			
1	Flouka	Jalatina					
385	Flouka	Unknown/unspec					
5	Mator	Lampara					
1	Mator	Lampara	Halig				
1	Mator	Lampara	Bringali deshi	Bringali khashin			
1	Mator	Beyatah	Mashruah				
1	Mator	Beyatah	Halig	Bringali khashin	Bringali deshi		
2	Mator	Mashruah					
1	Mator	Mashruah	Beyatah				
1	Mator	Sayeb	Bringali khashin	Bringali rgig			

Nb	Boat type	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6
1	Mator	Tahlig	Halig	Bdan Kahla			
37	Mator	Halig					
1	Mator	Halig					
12	Mator	Halig	Beyatah				
1	Mator	Halig	Beyatah	Lambukara	Bringali deshi	Bringali khashin	Bringali Sayeb
2	Mator	Halig	Beyatah	Bringali khashin			
2	Mator	Halig	Beyatah	Bringali khashin	Bringali deshi		
1	Mator	Halig	Beyatah	Bringali khashin	Bringali deshi	Bringali rgig	
1	Mator	Halig	Beyatah	Bringali deshi	Bringali khashin		
2	Mator	Halig	Garush				
1	Mator	Halig	Gorbara				
36	Mator	Halig	Bringali khashin				
1	Mator	Halig	Bringali khashin	Sayeb			
11	Mator	Halig	Bringali khashin	Bringali deshi			
22	Mator	Halig	Bringali khashin	Bringali deshi	Bringali rgig		
17	Mator	Halig	Bringali deshi				
1	Mator	Halig	Bringali deshi	Bringali khashin			
1	Mator	Halig	Bringali deshi	Bringali rgig			
1	Mator	Halig	Bringali deshi	Bringali rgig	Bringali khashin		
1	Mator	Halig	Bringali rgig				
1	Mator	Halig	Ghates garnet				
1	Mator	Shleef morjan					
1	Mator	Shleef morjan	Shleef Joghali	Bringali khashin	Bringali deshi		
1	Mator	Shleef morjan	Sertma taoum				
2	Mator	Shleef Joghali					
1	Mator	Shleef Joghali	Bringali khashin				
1	Mator	Shleef Joghali	Sertma reash				
25	Mator	Bringali khashin					
4	Mator	Bringali khashin	Halig				
1	Mator	Bringali khashin	Halig	Beyatah			
1	Mator	Bringali khashin	Shleef Joghali				
1	Mator	Bringali khashin	Shleef Joghali	Sertma reash	Sertma taoum	Bringali Sayeb	
1	Mator	Bringali khashin	Bringali khashin				
40	Mator	Bringali khashin	Bringali deshi				
1	Mator	Bringali khashin	Bringali deshi	Halig			
2	Mator	Bringali khashin	Bringali deshi	Halig	Beyatah		
14	Mator	Bringali khashin	Bringali deshi	Bringali rgig			
3	Mator	Bringali khashin	Bringali deshi	Bringali rgig	Halig	Beyatah	
1	Mator	Bringali khashin	Bringali deshi	Bringali rgig	Sertma reash		
1	Mator	Bringali khashin	Bringali deshi	Sertma reash			
1	Mator	Bringali khashin	Bringali deshi	Ghates sfenj			
2	Mator	Bringali khashin	Bringali rgig				
1	Mator	Bringali khashin	Sertma reash				
2	Mator	Bringali khashin	Ghates garnet				
1	Mator	Bringali khashin	Ghates sfenj				
25	Mator	Bringali deshi					
2	Mator	Bringali deshi	Beyatah				
1	Mator	Bringali deshi	Beyatah	Halig			
1	Mator	Bringali deshi	Sayeb	Halig			
25	Mator	Bringali deshi	Halig				
1	Mator	Bringali deshi	Halig	Beyatah			
5	Mator	Bringali deshi	Halig	Bringali khashin			
1	Mator	Bringali deshi	Halig	Bringali khashin	Beyatah		
1	Mator	Bringali deshi	Shleef morjan				
8	Mator	Bringali deshi	Bringali khashin				
2	Mator	Bringali deshi	Bringali khashin	Halig			
1	Mator	Bringali deshi	Bringali khashin	Bringali rgig			
1	Mator	Bringali deshi	Bringali khashin	Bringali rgig	Beyatah		
1	Mator	Bringali deshi	Bringali rgig				
1	Mator	Bringali deshi	Bringali rgig	Bringali khashin			
1	Mator	Bringali deshi	Bringali rgig	Bringali khashin	Halig		
1	Mator	Bringali rgig					
1	Mator	Sertma taoum	Sertma reash	Sertma baletta	Shleef morjan	Shleef Joghali	

Nb	Boat type	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6
2	Mator	Sertma reash					
5	Mator	Ghates garnet					
1	Mator	Ghates garnet	Bringali khashin	Mashruah			
21	Mator	Ghates sfenj					
1	Mator	Jalatina					
144	Mator	Unknown/unspec					
78	Lampara	Lampara					
7	Lampara	Lampara	Beyatah				
2	Lampara	Lampara	Beyatah	Hilig			
1	Lampara	Lampara	Sayeb	Hilig	Beyatah		
1	Lampara	Lampara	Hilig	Beyatah	Mashruah		
1	Lampara	Lampara	Bringali khashin				
1	Lampara	Lampara	Bringali khashin	Bringali deshi	Bringali rgig		
1	Lampara	Lampara	Ghates garnet				
43	Lampara	Unknown/unspec					

APPENDIX VI EXAMPLE OF METIERS IN LIBYA

Metier	Gear/FAO	Local name	Boats	Fishers	Season	Fishing zone	Eff In	Eff Max	Left	Right	Genus	Species	T/A	Localname		
FARWAH	FAR01	07.50	Halq	40	200	11111000111	Softground	0	37	1	2	<i>Mullus</i> <i>Pagrus</i> <i>Scia</i> <i>Diplodus</i> Family <i>Lithognathus</i> <i>Pomatomus</i> <i>Sciaen</i>	<i>somohatus</i> <i>erythrinus</i> <i>officinalis</i> <i>annulatus</i> <i>lyophilus</i> <i>nometyus</i> <i>setifer</i> <i>umbra</i>	T T T A A A A A	Treila Morjan Setia Sbarus Bul Warkus Wagrus Ghrab	
FARWAH	FAR02	07.10	Bayatah	50mm	40	200	00100000000	0	37	5	8	<i>Euthymus</i>	<i>infellatus</i>	T	Roam	
FARWAH	FAR03	07.10	Washruah	40mm	40	200	11100000001	0	37	5	8	<i>Senola</i> <i>Dentex</i> Family <i>Sarpa</i> <i>Sciaen</i>	<i>dumetii</i> <i>dentex</i> <i>lyophilus</i> <i>salpe</i> <i>umbra</i>	T A A A A	Barema Denoldi Bul Shidba Ghrab	
FARWAH	FAR04	07.30	Dammasah		3	12	11111111111	0	9	0	2	Family <i>Dicentrarchus</i>	<i>lyophilus</i> <i>labrax</i>	T A	Bul Garous	
FARWAH	FAR05	09.30	Bringal oeshi	# 7-8	10	45	002111111000	0	33	46	8	8	<i>Dentex</i> <i>Epinephelus</i> <i>Epinephelus</i> <i>Epinephelus</i> <i>Mullobus</i>	<i>dentex</i> <i>gusis</i> <i>coele</i> <i>aegeus</i> <i>mesolepis</i>	T T T T A	Denoldi Farouj Dooth Wemant Wareda
FARWAH	FAR06	08.20	Garush		100	300	11100000011	0	2	28	8	8	<i>Dolopus</i>	<i>ulgeris</i>	T	Gamer
FARWAH	FAR07	02.10	ShloofMorjan		15	50	002021111000	0	17	17	8	8	<i>Dentex</i> <i>Pagrus</i> <i>Diplodus</i> <i>Pagrus</i> <i>Spondylisoma</i>	<i>dentex</i> <i>erythrinus</i> <i>salpe</i> <i>pagrus</i> <i>carphatus</i>	T T A A A	Denoldi Morjan Garagous Bagro Tammuc
FARWAH	FAR08	09.00	Shar Garous		30	80	002111110000	0	2	7	2	2	<i>Dicentrarchus</i> <i>Dentex</i> <i>Sparus</i>	<i>labrax</i> <i>dentex</i> <i>aureus</i>	T A A	Garous Gango Aurac
FARWAH	FAR09	07.10	Kellaba		5	15	002111100000	0	2	7	3	3	Family <i>Rhinobatos</i> <i>Squalia</i>	<i>Darchanoides</i> <i>app</i> <i>squaline</i>	T A A	Kelb Wahrah Shen
ZuWA RAH	ZuWA1	01.1.1	Lampara		30	270	11111111111	0	46	65	22	11	<i>Boops</i> <i>Caranx</i> <i>Sardinella</i> <i>Scomber</i> <i>Sarpa</i> <i>Sphyraena</i>	<i>boops</i> <i>truncatus</i> <i>aurea</i> <i>japonicus</i> <i>salpe</i> <i>app</i>	T T T T A A	Boga Sawro Sardin Cawall Shidba Wahzad
ZuWA RAH	ZuWA2	07.30	Lambukara		3	9	00200011110	0	22	74	5	5	<i>Doryphera</i>	<i>hippurus</i>	T	Lambuka
ZuWA RAH	ZuWA3	07.10	Bayatah	50mm	15	70	11100000011	0	9	19	11	11	<i>Euthymus</i> <i>Senola</i> <i>Senola</i>	<i>infellatus</i> <i>salpe</i> <i>dumetii</i>	T A A	Roam Wgharac Barema
ZuWA RAH	ZuWA4	07.10	Washruah	40mm	8	24	11100000011	0	9	19	11	11	<i>Senola</i> <i>Pomatomus</i> <i>Sarpa</i> <i>Sphyraena</i>	<i>dumetii</i> <i>setifer</i> <i>salpe</i> <i>app</i>	T A A A	Barema Wagrus Shidba Wahzad
ZuWA RAH	ZuWA5	07.50	Halq		10	30	11111111111	0	7	19	11	11	<i>Mullus</i> <i>Pagrus</i>	<i>somohatus</i> <i>erythrinus</i>	T T	Treila Morjan

APPENDIX VII DESCRIPTION OF FISHING GEAR CURRENTLY USED IN LIBYA

Longlines برنقالي					
Local name	Bringali Khashin برنقالي خشين	Bringali Dechi برنقالي ديشي	Bringali Rgig برنقالي رقيق	Bringali Kelb برنقالي كلب	Bringali Sayeb/Ayam برنقالي عايم / سايب
Gear	Bottom set longline, large hooks	Bottom set longline, medium hooks	Bottom set longline, small hooks	Bottom set longline for sharks	Drifting Longline
ISSCFG	LLS 09.3.0	LLS 09.3.0	LLS 09.3.0	LLS 09.3.0	LLD 09.4.0
Specifications	- Ø 2.5 mm braided, 900 fathoms main line - Ø 100-120 monofilament 1.5m snoods, 3 fathoms apart - hook # 4-5-6	- Ø 2 mm braided, 1000 fathoms main line - Ø 90 monofilament 1.5m snoods, 2.5 fathoms apart - hook # 7-8-9	- Ø 1.5 mm braided, 1000 fathoms main line - Ø 70 monofilament 1m snoods, 2 fathoms apart - hook # 10-11-12	- Ø 4 mm braided, 1000 fathoms main line - Ø 200 monofilament 1 m snoods, 10 fathoms apart, ending with 50 cm steel wire - hook # 01	- Ø 200-300 monofilament, 7500 fathoms main line - Ø 130 monofilament 1.5m double lines snoods, 25 fathoms apart - Float each 5 hooks connected to main line by 2 fathoms Ø 130 monofilament - hook # 01
Unit of gear, & number per boat	Basket of 300 hooks Flouka 2-3 baskets Mator 4-7 baskets	Basket of 400 hooks Flouka 2-3 baskets Mator 4-7 baskets	Basket of 500 hooks Flouka 2-3 baskets Mator 4-7 baskets	Basket of 100 hooks Flouka 1 baskets	Basket of 300 hooks Mator 1-2 baskets
Target species	Farouj <i>Epinephelus guaza</i> Dooth <i>Epinephelus costae</i> Khanzirah <i>Epinephelus caninus</i> Joghali <i>Dentex gibbosus</i> Mennani <i>Epinephelus aeneus</i>	Dendichi <i>Dentex dentex</i> Farouj <i>Epinephelus guaza</i> Dooth <i>Epinephelus costae</i> Joghali <i>Dentex gibbosus</i> Bagro <i>Pagrus pagrus</i>	Morjan <i>Pagellus erythrinus</i> Garagous <i>Diplodus vulgaris</i> Bagro <i>Pagrus pagrus</i> Dendichi <i>Dentex dentex</i>	Kelb Fam. <i>Carcharinidae</i>	Aboucef <i>Xyphias gladius</i> Kelb Fam. <i>Carcharinidae</i> Zurgaya Fam. <i>Lamnidae</i>
Depth range	5 - 200 Ftm	5 - 200 Ftm	3-35 Ftm	1 - 30 Ftm	5à - 300 Ftm
Bottom type	Rocky	Rocky	Rocky	Sandy	Pelagic
Season (1)	May - October	May - December	January - April	March - May	June - October
Fishing method	Bait: whole sardine or bogue Set at sunset, hauled at sunrise, fishing all night	Bait: half sardine Set before sunrise, fishing for 3 hours	Bait: Octopus, Squid, Cuttle fish Set before sunrise, fishing 3 hours, sometimes also set after sunset	Bait: trammel net bycatch (small breams, wrasses, etc...) Set at sunset, hauled at sunrise, fishing all night	Bait: whole mackerel Set at sunset, hauled at sunrise, fishing all night

(1) locally related to the availability of bait

Trolling lines سرتمه			
Local name	Sertma taoum (1) سرتمه طعوم	Sertma reach سرتمه ريش	Sertma baletta / kachik / lussafa (1) سرتمه باليتا / كاشيك / لصاصاف
Gear	Trolling line with bait	Trolling line with feather lure	Trolling line with spoon
ISSCFG	LTL 09.6.0	LTL 09.6.0	LTL 09.6.0
Specifications	- Ø 120-140 monofilament, 20 fathoms lines, in three sections separated by two swivels - lead sinker followed by swivel - Ø 70-100 monofilament 4 fathoms line with hook - hook # 4-6	- Ø 120-140 monofilament, 20 fathoms lines, in three sections separated by two swivels - I lead sinker followed by swivel - Ø 70-100 monofilament 4 fathoms line with feather lure and hook - hook # 9-12	- Ø 120-140 monofilament, 20 fathoms lines, in three sections separated by two swivels - lead sinker followed by swivel - Ø 70-100 monofilament 4 fathoms line with spoon - Spoon or artificial fish
Unit of gear, & number per boat	Flouka or Mator 2 lines	Flouka or Mator 2 lines	Flouka or Mator 2 lines
Target species	Shola <i>Seriola dumerili</i>	Rzam <i>Euthynus alleteratus</i>	Dendichi <i>Dentex dentex</i>
Depth range	3 -30 Ftm	5 - 50 Ftm	5 - 30 Ftm
Bottom type	Over rocky bottom	Pelagic	Over rocky bottom
Season	July - March	September - February	All year
Fishing method	Bait: Needlfish, mackerel, cuttle fish and squids Daytime	Artificial lure Daytime	Spoon Daytime

(1) For sertma taoum and baletta, the heavy lead sinker may be replaced by 50 small lead beads along the line, it is then called **Sertma sebha (سرتمه سيحه)**

Hand lines شليف			
Local name	Shleef morjan شليف مرجان	Shleef joghali شليف جغالي	Gorbara جرباره
Gear	Hand lines	Hand lines	Hand lines
ISSCFG	LHP 09.1.0	LHP 09.1.0	LHP 09.1.0
Mounting	- Ø 120 monofilament, 20-40 fathoms, & swivel connecting to - Ø 80 monofilament 4 fathoms line with 5 to 7 hooks 30 cm apart - lead sinker at the end 300-500 g - hook # 10-12	- Ø 160 monofilament, 50-100 fathoms, & swivel connecting to - Ø 120 monofilament 5 fathoms line with 5 to 7 hooks 30 cm apart - lead sinker at the end 100-1500 g - hook # 5-7	- Ø 70 monofilament, 25 fathom - squid jig
Unit of gear, & number per boat	line with 5-7 hooks Flouka 3 lines Mator 5 lines	line with 5-7 hooks Mator 5 lines	line with one jig Flouka 1-3 depending on crew skill Mator 5-10
Target species	Morjan <i>Pagellus erythrinus</i> Tannut <i>Spondyliosoma cantharus</i> Bagro <i>Pagrus pagrus</i>	Joghali <i>Dentex gibbosus</i> Khanzirah <i>Epinephelus caninus</i>	Calamar <i>Loligo vulgaris</i> Sebia <i>Sepia officinalis</i>
Depth range	15 - 50 fathoms	>50 fathoms	2-15 fathoms
Bottom type	Rocky	Rocky	Rocks/Posidonia
Season	All year	June - October	December - March
Fishing method	Bait: Squid, cuttle fish and sardine	Bait: sardine	Squid jig

Pots جرار	
Local name	Garush / Jrar جرار / جرّوش
Gear	Pots
ISSCFG	FPO 08.2.0
Mounting	- Ø 8 braided nylon 100 fathom main line with 50 pots, one fathom apart - pots are attached to the main rope by a piece of 50 cm Ø 8 braided nylon rope
Unit of gear, & number per boat	700 to 1000 pots per batah fishing inside the lagoon 1000 to 1500 pots per matars fishing outside the lagoon
Target species	Garnet <i>Octopus vulgaris</i>
Depth range	1/2 - 5 fathoms
Bottom type	Sandy, muddy, grassy, flat rocks
Season	November - March
Fishing method	Pots are set at sea throughout the season and checked daily to collect the catch

Set Gillnets شباك				
Local name	Bdan Kahla بدن كحله	Bdan sardinah بدن سردينه	Bdan Mughzel بدن مغزل	Bdan yebrah بدن ابره
Gear	Set Gillnets	Set Gillnets	Set Gillnets	Set Gillnets
ISSCFG	GNS 07.1.0	GNS 07.1.0	GNS 07.1.0	GNS 07.1.0
Specifications	- Mesh 28mm - Length 180 - 200 fathoms - Height 150/200 meshes - Rope Ø 6-7mm - Float 65 mm one every 75 cm - Lead 180g every 45 cm	- Mesh 24mm - Length 220 fathoms - Height 200/300 meshes - Rope Ø 6-7mm - Float 65 mm one every 75 cm - Lead 180g every 45 cm	- Mesh 18mm - Length 220 fathoms - Height 200/300 meshes - Rope Ø 6-7mm - Float 65 mm one every 75 cm - Lead 180g every 50 cm	- Mesh 16mm - Length 220 fathoms - Height 200/300 meshes - Rope Ø 6-7mm - Float 65 mm one every 75 cm - Lead 180g every 50 cm
Unit of gear, & number per boat	Flouka 1 piece (180-200 Ftm)	Flouka 1 piece (220 Ftm)	Flouka 1 piece (220 Ftm)	Flouka 1 piece (220 Ftm)
Target species	Kahla <i>Oblada melanura</i>	Sardinah <i>Sardinella aurita</i>	Mughzel <i>Sphyraena spp.</i>	Yebrah <i>Belone belone</i>
Depth range	3-7 Ftm	10-25 Ftm	Flouka 1 piece (220 Ftm)	Flouka 1 piece (220 Ftm)
Bottom type	Rocky	Soft/grassy	Rocky/grassy	Sandy
Season	May - June (breeding season)	March - May	September - November	December - January
Fishing method	Set at sunset, hauled at sunrise, fishing all night The net is set exactly at the edge of rock bars perpendicular to the coast.	Set at sunset, hauled at sunrise, fishing all night	Set at sunset, hauled at sunrise, fishing all night	Set at sunset, hauled at sunrise, fishing all night

	Set Gillnets شباك		
Local name	Mashruah مشروح	Beyatah رباته	Sayeb Ayam سايب عائم
Gear	Set Gillnets	Set Gillnets	Drifting Gillnets
ISSCFG	GNS 07.1.0	GNS 07.1.0	GND 07.2.0
Specifications	- Mesh 40mm - Length 100 fathoms - Height 150/200 meshes - Rope Ø 6-7mm - Float 75 mm one every 100 cm - Lead 180g every 50 cm	- Mesh 50mm - Length 100 fathoms - Height 150/200 meshes - Rope Ø 6-7mm - Float 90 mm one every 110 cm - Lead 180g every 50 cm	- Mesh 50mm - Length 100 fathoms - Height 150/200 meshes - Rope Ø 6-7mm - Float 90 mm one every 150 cm - Lead 180g every 180 cm
Unit of gear, & number per boat	Flouka 400 Ftm = 4 pieces Mator 1000 Ftm = 10 pieces	Flouka 400 Ftm = 4 pieces Mator 1000 Ftm = 10 pieces	Flouka 800 Ftm = 8 pieces Mator 2000 Ftm = 20 pieces
Target species	Barema <i>Seriola dumerili</i> Gargous <i>Diplodus sargus</i> Buri Fam. <i>mugilidae</i>	Rzam <i>Ethynus alletteratus</i>	Rzam <i>Ethynus alletteratus</i>
Depth range	3-8 Ftm	3-8 Ftm	10-50 Ftm
Bottom type	Rocky/grassy	Soft sand/grass	Pelagic
Season	All year	March - May	October - March
Fishing method	Set at sunset, hauled at sunrise, fishing all night	Set at sunset, hauled at sunrise, fishing all night	Set at sunset, hauled three hours after

	Trammelnet شباك		
Local name	Halig Gamberi	Halig Chabakoni Mbatten Tremalli	Halig Rami
Gear	حليج چمبري Set Trammel net for shrimp	حليج , شبكوني , مبطن , ترمالي Set Trammel net	حليج رمي Encircling Trammel net
ISSCFG	GTR 07.5.0	GTR 07.5.0	GTC ?? 07.?.?
Specifications	- in mesh 24mm out mesh 60mm - Length 50 fathoms - Height 1 to 1.5 meters - Rope Ø 3-4mm - Float 35 mm one every 50 cm - Lead 80g every 25 cm	- in mesh 26mm out mesh 120mm - Length 100 fathoms - Height 7 or 14 meshes (120mm) - Rope Ø 6-7mm - Float 65 mm one every 100 cm - Lead 180g every 50 cm	- in mesh 26mm out mesh 120mm - Length 180/220 fathoms - Height 30 meshes (120mm) - Rope Ø 6-7mm - Float 90 mm one every 100 cm - Lead 180g every 40 cm
Unit of gear, & number per boat	Flouka 400/500 Ftm =8/10 pieces	Flouka 200/250 Ftm =4/5 pieces Mator 1500/2000 Ftm = 15/20 pieces	Flouka 200/250 Ftm =4/5 pieces
Target species	Gamberi kabir <i>Penaeus keraturus</i>	Trelia <i>Mullus surmuletus</i> Morjan <i>Pagellus erythrinus</i> Sebia <i>Sepia officinalis</i>	Mughzel <i>Sphyraena spp.</i> Buri Fam. <i>Mugilidae</i> Shelba <i>Sarpa salpa</i> Shola <i>Seriola dumerili</i>
Depth range	10-25 Ftm	15-30 Ftm	3-7 Ftm
Bottom type	Sandy/muddy	Rock edges	All types of bottom
Season	May - July	All year	All year
Fishing method	Set at sunset, hauled at sunrise, fishing all night	Set at sunset, hauled at sunrise, fishing all night	Fish located by sight is encircled, then scared into the net before hauling. Operation is done when the sun is high

Local name	Kellabia Khannagah كلابيه خنّافه	Tahlig تحليج	Lambukara لمبوكارا
Gear	Fixed gillnet for sharks	Encircling gillnet	Surrounding net without purse line
ISSCFG	GNF 07.5.0	GNC 07.3.0	LA 01.2.0
Specifications	<ul style="list-style-type: none"> - Mesh 150mm twine 4mm - Length 400-500 fathoms - Height 12/20 meshes - Rope Ø 10mm - Float 90 mm one every 100 cm - Lead 200g every 50 cm + 5-7 kg weights every 5 fathom 	<ul style="list-style-type: none"> - Mesh 27mm - Length 200-300 fathoms - Height 100/200 meshes - Rope Ø 8mm - Float 90 mm one every 100 cm - Lead 180g every 40 cm 	<ul style="list-style-type: none"> - Mesh: bag 27mm, wings 28,40,50 mm - Length 150 fathoms - Height 12 Ftm - Bag opening 4 Ftm - Float 90 mm one every 50 cm at the end of wings, gradually increasing to every 10 cm at the bag - Lead 180g every 50 cm
Unit of gear, & number per boat	Flouka 2000-2500 Ftm = 4-5 pieces	Flouka 200 Ftm =1 piece Mator 300 Ftm =1 piece	Flouka/Mator min 20 FADs, up to 60
Target species	Fam <i>carcharinidae</i>	Mughzel <i>Sphyræna spp.</i> Palamet yamani <i>Scomberomorus commerson</i> Sawro imbriali <i>Caranx crysos</i> Yebrah <i>Belone belone</i> Shola <i>Seriola dumerili</i>	Lambuka <i>Coryphaena hippurus</i>
Depth range	5 - 15 Ftm	3-10 Ftm	10-60 Ftm
Bottom type	Sandy	All types	Pelagic
Season	March - June	All year	August - December
Fishing method	Set at the beginning of the season perpendicularly to the direction of the coast and left in place for the whole season. Daily inspection for sharks captured	Scouting by sight, encircling and scooping fish with a piece of net and the assistance of a diver. Mainly in Missurata	Fish are attracted under the FADs set for the entire season Fishing takes place at sunrise and sunset At the beginning of the season the deeper FADs attract fish while at the end of the season the shallower FADs are more productive.

	Ghates Garnet	Ghates Farouj	Ghates sfenj
Local name	Ghates Garnet غطس جرنيط	Ghates Farouj غطس فروج	Ghates sfenj غطس سفنج
Gear	Free diving with hooked steel hook	Scuba / Compressor divers with spear gun	Compressor divers
ISSCFG	HAR 10.1.0	HAR 10.1.0	HAR 10.1.0
Unit of gear, & number per boat	2-3 divers per flouka	Flouka: 1-2 divers Mators: 3-4 divers	Mators: 3-4 divers
Target species	Garnet <i>Octopus vulgaris</i>	Farouj <i>Epinephelus guaza</i> Dooth <i>Epinephelus costae</i> Dooth Yahudi <i>Mycteroperca rubra</i>	Sfenj <i>Hypospongia communis</i> Kabatika Milati Smuka
Depth range	3-14 metres	20-50 metres	10-50 metres
Bottom type	Flat rocks	Rocky	hard ground
Season	August - December	March - November	June - September Mainly in Khalij area
Fishing method	diving during daytime, hooking octopus with steel rods	Divind during daytime, spearing the goupers, about 1/2 hour diveing per person	Diving during daytime, compressor on board connector to 70 m platic hose ending with regulator. Collecting sponge manually 1/2 diving per person