Scientific Advisory Committee

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New Sampling Approach
Catch and Effort Assessment Survey
for the small-scale fleet

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Introduction

- To meet the requirement mainly towards the GFCM (Task 1) and the EU Data Collection Framework *(EC93/2010),* in 2010 the Capture Fisheries Section within the Agriculture and Fisheries Regulation Department (AFRD), embarked on a new sampling approach for the small-scale fleet (<10m LOA).

PORT SAMPLING ➡ VESSEL SAMPLING approach

Sampling frame

- A multivariate sampling survey for vessels less than 10m LOA is conducted to obtain monthly data on landings per species and on fishing effort.
- The target population is made up of vessels registered in the Maltese fishing fleet register that include full-time commercial vessels (MFA) and part-time commercial vessels (MFB), and comprise both active and inactive vessels (EC93/2010).
- The sample is 10% of the respective population and is stratified randomly selected from the fleet segments from the fleet register.
- The sample is randomly determined every quarter.
- The sampling unit is a single vessel which is randomly selected from the vessel register.

Organisation for the Collection of information

- After the vessels to be sampled have been randomly selected, the list is submitted to the field recorders who then contact the vessel owners to notify them of their inclusion in the sample survey and to establish an interview plan and to request permission to use the data collected from the interviews.

- Periodically, training courses for the data collectors are organised to update them on:
- Any new developments,
- Further their knowledge mainly on aspects linked to species identification and different types of gear used.

Collection of data

- Data is collected by field recorders employed by the Fisheries Department.
- At the beginning of each month the vessel owners are given a data sheet that they have to fill every week.
- The interviews are conducted with the vessel owner every week either in the ports or at home.

- Information obtained mainly refer to:
  - catches,
  - effort by gear and in fishing days,
  - type of gear,
  - fishing areas and activity,
- The list of all the variables collected are detailed in Appendix VIII of EC 93/2010.

Collection of data

- This methodology of obtaining data overcomes the difficulty of acquiring data from the fish market and other official sources for the small scale fishery which can have many errors due to various reasons such as:

  - Underestimation in information on landings declared in the invoices,
  - Direct Sales which are not recorded,
  - Erroneous names attributed to fish species,
  - Furthermore data on effort and target species is not usually reported in the sales vouchers.
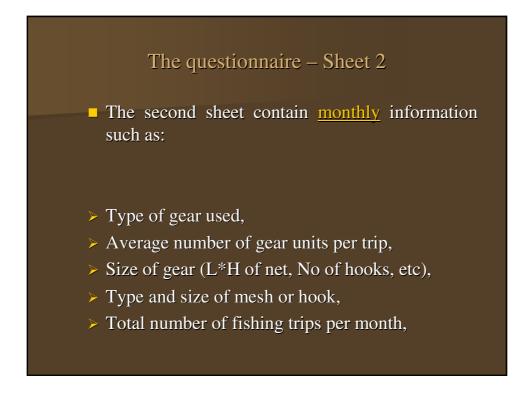
The questionnaire

- The data of each individual vessel is computerised through a software programme elaborated for the specific aims of the gathered data.

- The questionnaire is composed of two separate sheets.
- First sheet is to be filled in by the vessel owner (very simple),
- Second sheet is to be filled in by the interviewer and the fisherman.

- Both sheets have to be completely filled in on a monthly basis.

The questionnaire – Sheet 1

- The sheets contain general information such as:
- Vessel name and registration number,
- Month and year.

- The first sheet contain <u>weekly</u> information such as:
- Type of gear used,
- Species caught (according to gear used),
- Weight of species caught in kg,
- Number of fishing days by type of gear used,
- Target species by type of gear used.

Kunfidenzjali - Informazzjoni miġbura għal użu ta' statistika biss

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KWESTJONARJU TA' KULL XAHAR DWAR IL-QABDA U SFORZ TAS-SAJD - DGĦAJJES (<10m LOA)

Xahar	Sena		Numru ta' Reġistrazzjoni	MFA0001
Awissu	2010			

1 Parit	☐	6 Konz tal-qiegħ	☑	11 Nassi Vopi	☑
	☐	7 Konz tal-wiċċ	☐	12 Lampara	☐
	☐	8 Irmiġġ	☐	13 Lampuki FADs	☐
	☐	9 Rixa	☑	14 Tartarun	☐
	☐	10 Kulpara/Ħajt	☐	15 Gangmu	☐

Gimgħa (1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
...d skond l-irkaptu											1					

Isem ta' l-Ispeċi (ħuta)		Ref. ta' l-irkaptu	Piż (kg)	Isem ta' l-Ispeċi (ħuta)	Ref. ta' l-irkaptu	Piż (kg)
Vopi	☑	11	8		☐	
	☐				☐	
	☐				☐	
	☐				☐	
	☐				☐	
	☐				☐	
	☐				☐	

Gimgħa (2)

Referenza ta' l-irkaptu		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Numru ta granet tistad skond l-irkaptu							2			4							

Isem ta' l-Ispeċi (ħuta)		Ref. ta' l-irkaptu	Piż (kg)	Isem ta' l-Ispeċi (ħuta)	Ref. ta' l-irkaptu	Piż (kg)
Sargi	☑	6	16		☐	
Denci	☐	6	6		☐	
Cippullazza	☐	6	12		☐	
Lipp	☐	6	7		☐	
	☐				☐	
Lampuki	☑	9	8		☐	
	☐				☐	

The questionnaire – Sheet 2

- The second sheet contain _monthly_ information such as:

  - Type of gear used,
  - Average number of gear units per trip,
  - Size of gear (L*H of net, No of hooks, etc),
  - Type and size of mesh or hook,
  - Total number of fishing trips per month,

The questionnaire – Sheet 2 (cont.)

- Total number of fishing days per month,
- Average number of days at sea,
- Average number of fishing operations per day,
- Average fishing time (soaking time in hrs),
- Fishing area,
- Average number of crew per trip.

The questionnaire – Sheet 2 (cont.)

SMALL-SCALE FISHING FLEET (<10m LOA) - CATCH AND EFFORT MONTHLY QUESTIONNAIRE   ©MCFS, 2009

DATE[1]	Month [1b]	Year [1c]	VESSEL DETAILS[2]	Reg number [2a]	Vessel name [2b]
	Awissu	2010		MFA0001	Ta' Pompei

GEAR USED[3]	GEAR CHARACTERISTICS[4]				FISHING ACTIVITY[5]				AREA[6]	CREW[7]
	Avg. N° of gear units/trip [4a]	Avg. L*H of net (m), N° of hooks or N° of traps/unit; Width of mouth or N° of FADs fished [4b]	Type of mesh: Square (S) or Diamond (D), Type of hook: J-type (J) or Circle (C) [4c]	Size (mm) or type name of mesh or hook [4d]	Total No of Fishing days/month [5a]	Avg. No of Days at sea [5b]	Avg. N° of fishing operations per day [5c]	Avg. Fishing time in hrs (soaking time) [5d]	Fishing area (code)	Avg. N° of crew on board/trip
Trammel net: Parit										
Comb. gillnets & trammel nets: Parit Xkitt										
Set gillnet: Xkitt										
Set gillnet: Tal-Kahli										
Set gillnet: Għoli/Għezula										
Set bottom longlines: Konz tal-Qieħ	2	500	J	8mm	2	1	1	8	M214	1
Drifting longlines: Konz tal-wiċċ										
Set surface longlines: Irmigg										
Hand trolling lines: Rixa	1	2	J	2	3	1	-	5	M211	1
Handlines and Pole lines: Kulpara										
Pots: Nassi tal-Vopi	2	5	-	-	2	1	1	24	M211	1
Pots: Nassi tal-Arznell										
Pots: Nassi tal-Qamit										
Purse seine: Lampara										
Surrounding net: Lampuki										
Vessel seine: Tartarun										
Bottom shrimp trawl: Gangmu										

Comments[8]

Estimation procedure & Data quality

- From the vessels sampled, data on landings and effort is raised to estimate the landings and effort to the total fleet of the under 10 metre vessels.

- Raising is based on the weighting factor attributed to the total fleet segment of the under 10 metre vessels.

- Data quality is primarily assessed by estimating the coefficient of variation.

Thank you