

# SAMPLING PROTOCOL FOR THE COLLECTION OF CATCH, EFFORT AND BIOLOGICAL DATA IN EGYPT



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS



## Egyptian coast at Mediterranean Sea



- The General Authority for Fish Resources Development (GAFRD) - Ministry of Agriculture, is the state agency responsible for managing and controlling Egyptian fisheries including the enforcement of the fisheries legislation with the support of the coastal guard.
- The two important parts of the fishery information system in GAFRD are the fishing fleet census, and the catch statistics collection system.
- SAMAC is now under implementation in the GAFRD main office in Cairo.

## Fisheries profile

- **Bottom Otter Trawl Fishery**  
1061 registered bottom otter trawlers in Mediterranean coast of Egypt (average length of 19.2 m, varies from 16 to 30 m).
- Powered by a main engine of 50 to 800 hp with the majority (86 %) from of 100-250 hp (GAFRD, 2009).
- Target species are shrimps (*Penaeus spp.*, *Metapenaeus spp.*, and *Marsupenaeus spp.*), *Sepia officinalis*, and *Mullus spp*, *Saurida undosquamis* and species of the family Sparidae.

### **Purse Seine Fishery**

- 238 registered purse seiners, which ranged from 15 to 25 m in length.
- Powered by engines from 50 to 500 hp with the majority (68 %) having engines from 100 - 200 hp (GAFRD, 2009)
- Sardines (*Sardinella aurita*) and European anchovy *Engraulis encrasicolus* are the main target species.

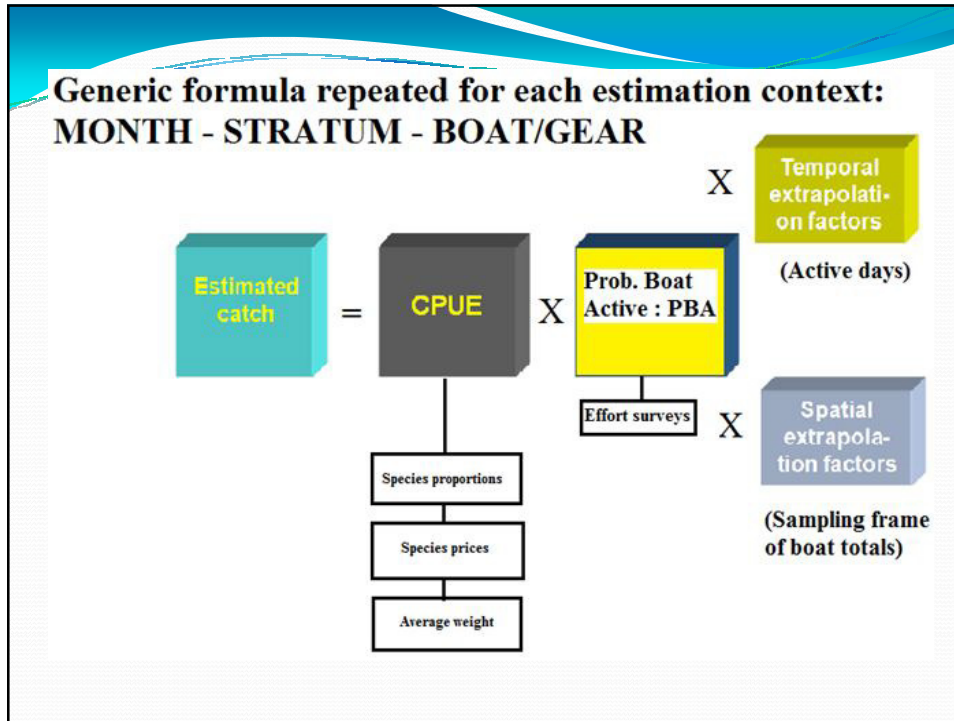
### **Artisanal Fisheries (Long line and Gill - trammel nets)**

- 1797 vessels, which range from 7-15 m in length
- Powered by small outboard or inboard engines from 8 to 150 hp (GAFRD, 2009).
- Target both demersal and pelagic species which change from one season to another.

## **Guidelines for the collection of Catch and Effort data**

- Data collection forms were drafted and field-tested and workplans were agreed upon with respect to data collection. Concerning computer operations the GAFRD-owned catch/effort system SAMAC has been operating since June 2011 for handling the basic functions of the sample-based catch/effort programme.





**Landings – daily sampling and effort requirements for >=90% spatial and temporal accuracy**

Boat/Gear	# of units	POP size <sup>7</sup>	1	2	3	4	5	6	7	8	TOT	RED LIMIT <sup>8</sup>
Trawlers	638	19140	6	6	6	6	6	6	6	6	<b>48</b>	<b>32</b>
Longliners	166	4980	5	5	5	5	5	5	5	5	<b>40</b>	<b>26</b>
Purse seiners	16	480	3	3	3	3	3	3	3	3	<b>24</b>	<b>16</b>
Trammel net	12	360	3	3	3	3	3	3	3	3	<b>24</b>	<b>15</b>

Boat/Gear	# of units	POP size <sup>9</sup>	# boats to be sampled (asked)	RED LIMIT
Trawlers	638	638	<b>25</b>	<b>17</b>
Longliners	166	166	<b>20</b>	<b>12</b>
Purse seiners	16	16	<b>8</b>	<b>6</b>
Trammel net	12	12	<b>7</b>	<b>5</b>

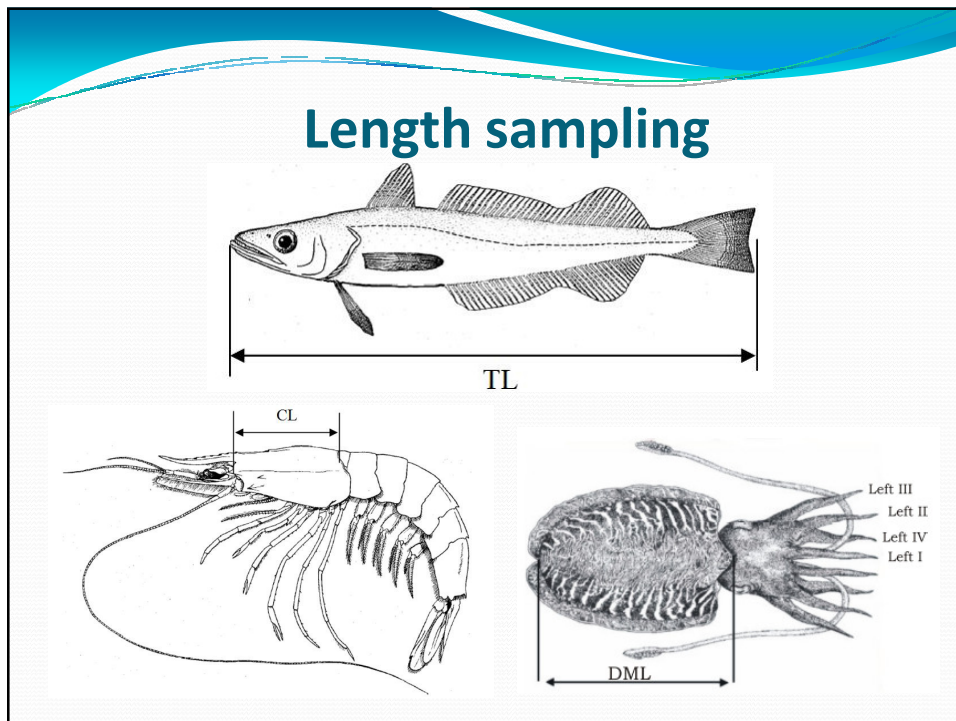


FAO EastMed : Egypt Pilot Survey - Landings					Form no:	
Port : <b>Kafr-El-Sheikh</b>		Date :		Recorder :		
الميناء		التاريخ		مدخل البيانات		
Vessel data						
بيانات المركب						
Vessel Name :		Vessel no :		Gear class :		
الاسم (المركب)		رقم المركب		الحرقة		
Length categ :		HP :		Material :		
الطول		قوة الحصان		مادة الصنع		
Gear and/or fishing method :						
الحرقة او طرز						
Fishing operations						
عمليات الصيد						
Days at sea :		Distance from shore :		Depth :		
ايام العمل		المسافة من الشاطئ		العمق		
Landings by species						
بيانات الازران						
Species (Arabic)	Species (scientific)	Kg	Price	Av. W	Fish in 1 kg	
الاسم العربي	الاسم العلمي	بالكيلو	السعر	متوسط الوزر	عدد الاسماك في الكيلو	
A1. Bogue	Boops boops					
A2. Lizard fish	Saurida undosquamis					
A3. Red mullet	Mullus barbatus					
A4. Round sardinella	Sardinella aurita					
A5. Shrimp scad	Alepes djedaba					
A6. Tiger prawn	Marsupenaeus japonicus					

### Species selected for biological sampling together with the quantity of samples (kg) per port, month and size category

GFCM Fleet segment	GFCM Fishing gear class	Stock	GFCM Target species group	Port	Size category at landings	Quantity of Fish to be sampled (Kg)			
Purse Seine	12-24	Seine Nets	<i>Sardinella aurita</i>	Small gregarious pelagic	Port Said	Large specimens	2		
						Small specimens	2		
					Damietta	Large specimens	2		
						Small specimens	2		
					Kafr-El-Sheikh	Large specimens	2		
						Small specimens	2		
					Maadia	Large specimens	2		
						Small specimens	2		
						Large specimens	2		
						Small specimens	2		
Trawl	12-24	Trawl	<i>Mullus surmuletus</i>	Demersal shelf Species	Port Said	Large specimens	2		
						Small specimens	2		
					Damietta	Large specimens	2		
						Small specimens	2		
					Kafr-El-Sheikh	Large specimens	2		
						Small specimens	2		
					Maadia	Large specimens	2		
						Small specimens	2		
						Large specimens	2		
						Small specimens	2		
					<i>Saurida undosquamis</i>	Demersal shelf Species	Port Said	Large specimens	2
								Small specimens	2
							Damietta	Large specimens	2
								Small specimens	2
							Kafr-El-Sheikh	Large specimens	2
								Small specimens	2
							Maadia	Large specimens	2
								Small specimens	2
								Large specimens	2
								Small specimens	2
					<i>Penaeus semisulcatus, and Metapenaeus stebbingi and/or other species in the same box</i>	Demersal shelf Species	Port Said	Large specimens	2
								Small specimens	2
							Damietta	Large specimens	2
								Small specimens	2
							Kafr-El-Sheikh	Large specimens	2
								Small specimens	2
							Maadia	Large specimens	2
								Small specimens	2
								Large specimens	2
								Small specimens	2
			<i>Sepia officinalis</i>	Demersal shelf Species	Port Said	Large specimens	2		
						Small specimens	2		
					Damietta	Large specimens	2		
						Small specimens	2		
					Kafr-El-Sheikh	Large specimens	2		
						Small specimens	2		
					Maadia	Large specimens	2		
						Small specimens	2		
						Large specimens	2		
						Small specimens	2		

BIOLOGICAL DATA ENTRY SHEET							
Date	Vessel name	Gear	Total weight of sample (kg)		Page No.		
Arabic name :				Scientific name:			
No.	Length (mm)	Individual Weight (g)	Gutted Weight (g)	Sex (F/M/U)	Maturity Stage	Gonads wt. (gm)	Otolith No.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

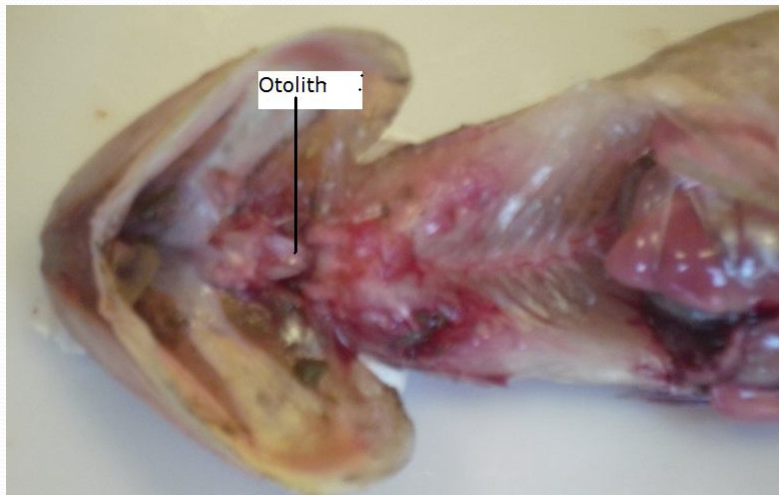




**Sexual macroscopic determination of male (top) and female (bottom) of *Saurida undosquamis***



**Otolith of *Saurida undosquamis***





- The program was in test phase during last six months (June - December 2011) and the regular sampling program in monthly basis started from January 2012.
- Twenty data collectors were trained for conducting both catch – effort and biological data record from assigned five ports.

*Thanks for attention*

- A pilot survey first on Catch and Effort data which was then followed by biological sampling has been started in Egypt with the Support of the EastMed project. The aim of the protocol is to assist the data collectors both in the field to conduct sampling during the pilot phase. The protocol contains guidelines on the routine collection of catch and effort data from the ports of Alexandria, Damiette, Kafr-El-Sheikh, Madaia ,Port Said and AlAreash. The second part of the document describes guidelines for the collection of biological data including length, weight, sex, sexual maturity, gonad weight and hard structures for age reading. It also includes guidelines on sampling frequencies and number of samples to be collected for both catch, effort and biological data. The protocol will also serve as a basis if Egypt intends to pursue a routine data collection system for the collection of fisheries data for stock assessment purposes.