



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

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Biological Parameters Database: ongoing proceedings

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SAC meetings of the Sub-Committees (SCSI, SCSA, SCESS, SCMEE)
(29th November – 2nd December 2010 St. George's Bay, Malta)

Introduction

Rome, 9-10 June 2010

9th Coordinating Meeting of the Sub-Committees (CMSC)

**The GFCM Secretariat was requested to improve the knowledge
on:**

- *the biology*
- *life history parameters*
- *stock structure*
- *spatial location of nurseries and spawning areas*

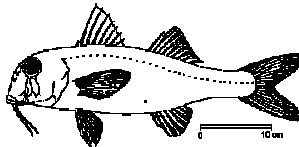
of 6 priority species in the GFCM Area

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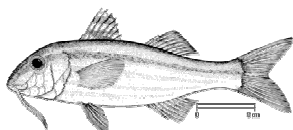
The six priority species



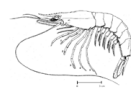
Engraulis encrasicolus (Linnaeus, 1758)
European anchovy



Mullus barbatus (Linnaeus, 1758)
Red mullet



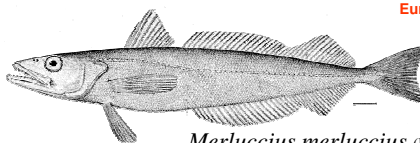
Mullus surmuletus (Linnaeus, 1758)
Stripped red mullet



Parapenaeus longirostris (Lucas, 1847)
Deep-water pink shrimp



Sardina pilchardus (Walbaum, 1792)
European pilchard



Merluccius merluccius (Linnaeus, 1758)
European hake

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Parameters investigated

- the VBGP (L_{∞} , K , t_0);
- the length-weight relationship - yearly (a and b);
- the natural mortality rate as scalar (M);
- the length/age at 50% maturity;
- the length/age at habitat recruitment;
- the vector of maturity and natural mortality by length/age;
- the reproduction period;
- the recruitment period;
- the spatial distribution of spawning and nursery areas

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The schedule

(started in August 2010)

1. **Organising an excel data sheet for the data collection**
2. **Bibliographic research**
 - papers (on the web, library, etc)
 - other sources (FishBase, SG-MED, Regional Projects, FAO Fish. Rep., etc.)
 - SAFs already in the GFCM records
3. **Circulate a questionnaire**
 - a GFCM message has been sent by email to experts and national focal points to collect recent and/or update information
4. **Transform the excel sheet into a web-based DB application**
 - design and populate of the Database
 - development of the web based application
5. **Test/implement the new GFCM Biological Parameters Database**



1. Organizing an excel data sheet for the data collecting

Species	Author(s)	Year	GSA(s)
<i>Mullus barbatus</i>	Scaccini	1947a, b	17 - Northern Adriatic
<i>Mullus barbatus</i>	Ananiadis	1950	22 - Aegean Sea
<i>Mullus barbatus</i>	Bougis	1952	07 - Gulf of Lion
<i>Mullus barbatus</i>	Wirszubski	1953	27 - Levant
<i>Mullus barbatus</i>	Nümann and Denizci	1955	24 - North Levant
<i>Mullus barbatus</i>	Larrañeta and Rodríguez-Roda	1956	06 - Northern Spain
<i>Mullus barbatus</i>	Gottlieb	1956	27 - Levant
<i>Mullus barbatus</i>	Akyüz	1957	27 - Levant
<i>Mullus barbatus</i>	Županović	1963	17 - Northern Adriatic
<i>Mullus barbatus</i>	Haldar	1970	17 - Northern Adriatic
<i>Mullus barbatus</i>	Passalunghi	1974	07 - Gulf of Lion
<i>Mullus barbatus</i>	Frogliani and Magistrelli	1981	17 - Northern Adriatic
<i>Mullus barbatus</i>	Jukić and Piccinetti	1981	17 - Northern Adriatic
<i>Mullus barbatus</i>	Papaconstantinou et al.	1981	22 - Aegean Sea

Unit of measure

FL		TL	SL	NG					
Von Bertalanffy									
L_{∞} (cm)			k (y ⁻¹)			t_0			
M	F	Combined	M	F	Combined	M	F	Combined	
		29.72			0.089				
		29.72			0.089				
23.39	24.55	24	0.158	0.225	0.2	-2.84	-2.01		
		24.8			0.29				
	26.2			0.41					
	20.8			0.49					
18.5	23.1		0.63	0.51					
21	17								
		23.31			0.049				
		21.49			0.038				

Total/Fork/Standard/etc. Length

7

Length/weight relationship - yearly					
Male		Female		Both	
a	b	a	b	a	b
0.0040006	3.125	0.0059837	3.078	0.0051649	3.111
0.0062252	3.016	0.0042768	3.154	0.0053218	3.124
0.0050094	3.12	0.0045515	3.153	0.0045515	3.153
0.0069	3.03	0.0069	3.03		

... and so on !

What's next ?

1. Check all the references to validate the information
2. Build the bibliographical references of the GFCM Database
3. Collect the questionnaires and import the new data
4. Transform the excel sheet into a web Database
5. Test the new GFCM Biological Parameters Database (feedback from users)

Ideas for the future ...

To implement the Database with more species

Provide national experts of the GFCM network with
Username and *Password* to insert new data by themselves
(instead of filling SA Forms) ?

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Thanks for your attention !

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