



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



SAC GFCM
Subcommittee of Stock Assessment

SCSA Assessment Forms



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PLEASE READ CAREFULLY BEFORE STARTING THE DATA ENTRY

Macro - Security settings

In order to ensure the proper full working of this Data Entry System, **the macros must be allowed to run.**




To change the security settings, please go to: **Tools --> Macro --> Security** and then select the **Medium** level. Close and re-open the file. Now you are ready to start clicking on Cover!

Control toolbox settings











The Design Mode button must be **OFF**.

Warnings

-  Please do not try to **Delete, Rename, Move** or **Copy** any Excel Worksheets.
-  Right now it is not possible to **Print** the completed worksheets only.
-  Once the data entry process is completed, the **file size** will be sensibly increased. Before sending it by email, please compress the file by using any zip tool available in your pc.

Colours and symbols meaning

W O R K S H E E T S	Blue Gray		Not compulsory sheet
	Pale Blue		Compulsory sheet
	Red		Not completed sheet
	Green		Completed sheet
C E L L S	Black asterisk	*	Compulsory sheet/field
	Turquoise		Compulsory field not yet completed
	White		Free cell
	Light green		Cell with the scroll-down menu
	Light yellow		Auto-complete cell

Excel shortcuts

Ctrl + C	Copy
Ctrl + V	Paste
Ctrl + X	Cut
Ctrl + Z	Undo
Ctrl + P	Print
Alt + Enter	Line break within a cell

For more detailed information about Excel shortcut and function keys, please refer to the Microsoft website.

**SAC GFCM
Subcommittee of Stock Assessment**

SCSA Assessment Forms Release 2 (2007) beta version

Since the SAC, and SCSA, inception (1999) a set of assessment forms were made available to scientists in order to provide a common framework to present assessments.

It has been decided to present a new release of these forms to facilitate their use. We took advantage of these upgrade to modify and amend some aspects. We would like to receive comments and suggestions from the users in order to improve the forms.

The structure of this new release is basically the same. The differences are:

- Migration from Word to Excel
- Some fields (yellow) are filled automatically
- Some sheets have been added
 - o A cover sheet with title, authors, species and GSAs
 - o A new sheet "other" allowing to include assessments based on methodologies other than the usual ones.
 - o An abstract sheet to be included (copy/paste) in the SCSA report
- It is more clear what sheets or fields are compulsory to fill
- The sheets for direct methods have not been yet upgraded

Excerpts from the presentation of 1st version of the assessment forms (1999), however the sheet "other" can be used in such a case

Each assessment consists of several sheets. Each assessment will take, at least, one sheet of paper numbered "0" (Sheet #0) and will also include no less than one copy of sheets "B", "P1" and "P2a" (now using the current "operational units" terminology). It is not compulsory to fill out any of the other sheets that make up this assessment form, but the person in charge is supposed to fill out some of them: otherwise no assessment is actually made. There may be more than one copy in several cases. Sheets "D" (diagnosis) and "Z" (conclusions and recommendations) should be considered as essential too.

Sheet	Title	Contents	# of sheets	Priority
0	Preliminary basic data on the assessment	Species, person in charge, date and code. All the sheets that belong to the same assessment share this code.	1	Indispensable
B	Biology of the species	Biological parameters used in the analyses (it is assumed that only one set of parameters is used).	1	Indispensable
P1	General information about the fishery	Catches by gear and associated fleet.	1 or more	Indispensable
P2a	Fishery by Operational Unit	Time series for the operational in question, including structure by size (or age).	At least as many as the OU numbers	Indispensable
P2b	Fishery by Operational Unit	Accompanying species and regulations applicable to operational unit.	At least as many as the OU numbers	If available
G	Indirect methods: global model	Description of model, data, parameters and results of each analysis.	As many as used in the analysis	If available
A1	Indirect methods: VPA, LCA	Description of model used and of general results of an analysis.	As many as used in the analysis	If available
A2	Indirect methods: data	Description of data used by gear for the analysis in A1.	As many as used in the analysis by OU	If available, requires A1
A3	Indirect methods: results of VPA	Detailed description of results by gear, structured by size or age.	As many as used in the analysis by OU	If available, requires A1
Y	Indirect methods: Y/R	Description of model, data, parameters and results.	As many as used in the analysis	If available
Other	Other assessment methods	Description of model, data, parameters and results of other assessment methods not included in the previous sheets.	1	If available
D	Diagnosis	Synthesis of results of analyses and diagnosis on the state of resources.	1	Indispensable
Z	Objectives and recommendations	Set the objectives to be attained and recommendations for their attainment.	1	Indispensable
C	Comments	At the option of the person in charge.	Unspecified	If available

SAC GFCM Subcommittee of Stock Assessment

Date*

5	September	2007
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Code*

SOL1707G.

Authors*

G. Fabi*, O. Giovanardi*, F. Grati*, I. Isajlovic*, S. Raicevich**, G. Scarcella*, N. Vrgoc***
--

Affiliation*

* CNR ISMAR Ancona; ** ICRAM Chioggia; *** IOF Split
--

Species Scientific name*

<i>Solea vulgaris</i> - SOL

Source: GFCM Priority Species

Geographical area*

Adriatic Sea

Geographical Sub-Area (GSA)*

17 - Northern Adriatic

Combination of GSAs

1	
2	
3	

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Assessment form

Sheet #0

Basic data on the assessment

Code: SOL1707G.

Date*	5	Sep	2007	Authors*	G. Fabi*, O. Giovanardi**, F. Grati*, I. Isajlovic***, S. Raicevich**
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Species Scientific name*	Solea vulgaris - SOL	Species common name*	Sole
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Data Source

GSA*	17 - Northern Adriatic	Period of time*	2005-2006
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Description of the analysis

Type of data*	Catch data from experimental surveys; landing data	Data source*	rapido trawl surveys; sampling of landings
Method of assessment*	Length-converted catch curve analysis	Software used*	ATrIS, LFDA 5.0, FISAT II

Sheets filled out

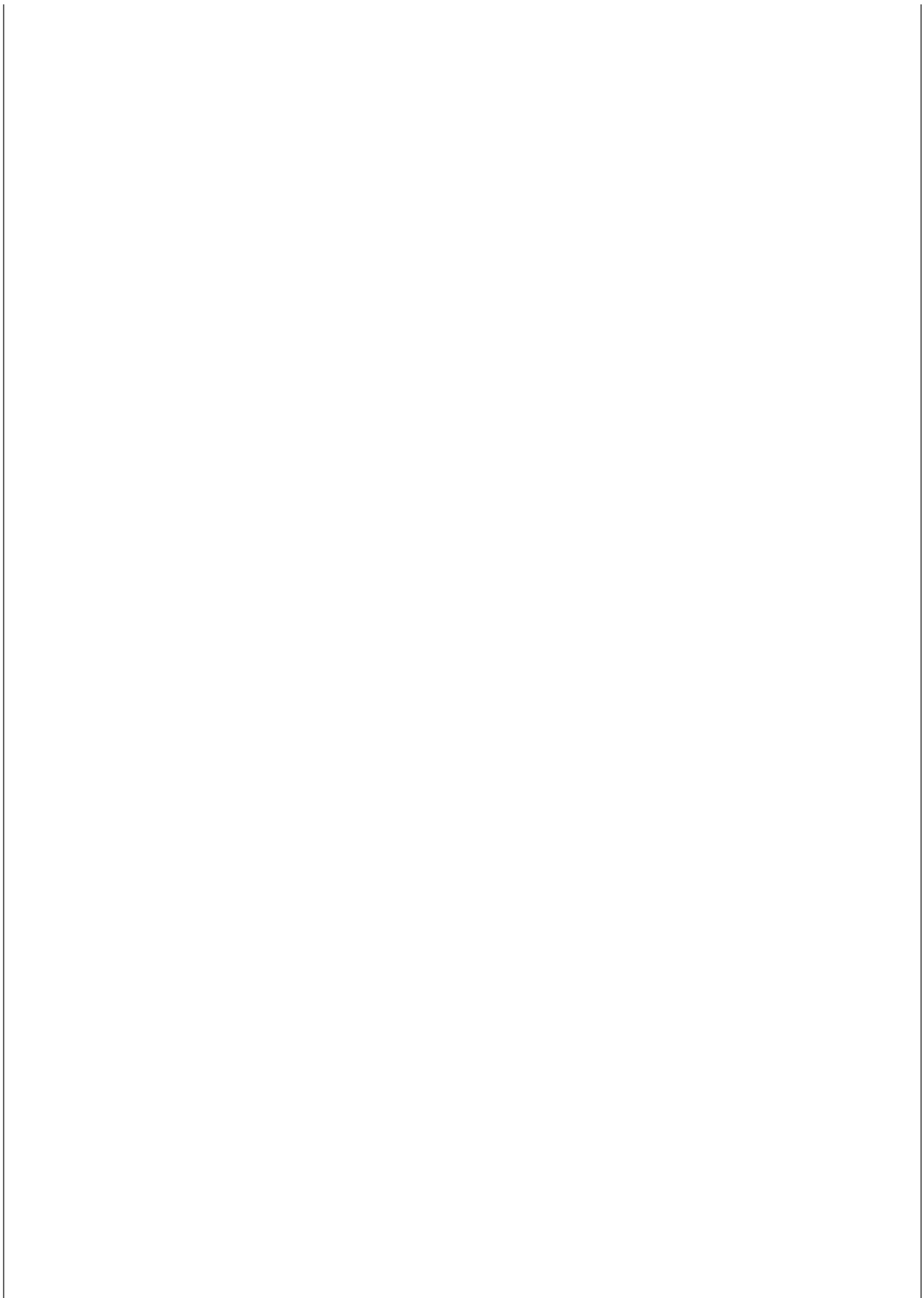
B	P1	P2a	P2b	G	A1	A2	A3	Y	Other	D	Z	C
---	---	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	1	1	#REF!

Comments, bibliography, etc.

Kirkwood G.P., Auckland R., Zara S.J. 2001a. Length Frequency Distribution Analysis (LFDA), Version 5.0. MRAG Ltd, London, UK.

Gayanilo, F.C.Jr.; Sparre, P.; Pauly, D. 2005. FAO-ICLARM Stock Assessment Tools II (FiSAT II). Revised version. User's guide. FAO Computerized Information Series (Fisheries). No. 8, Revised version. Rome, FAO. 168 pp.

Gramolini R., Mannini P., Milone N., Zeuli V. 2005. AdriaMed Trawl Survey Information System (ATrIS): User manual. AdriaMed Technical Documents No 17, GCP/RER/010/ITA/TD-17. 141 pp.



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Assessment form

Sheet B
Biology of the species

Code: SOL1707G.

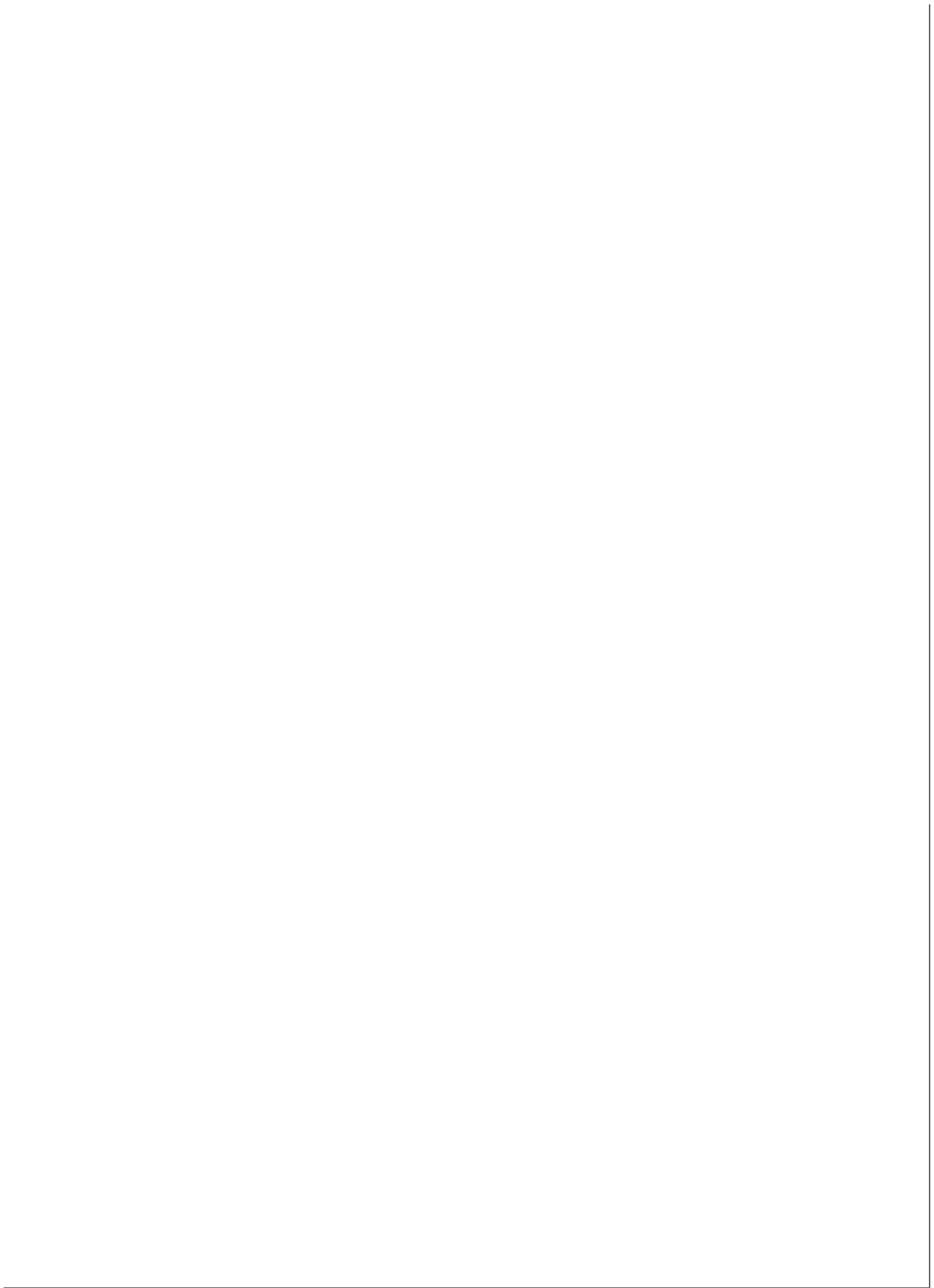
Biology

		Somatic magnitude measured (LH, LC, etc)*			Units*	
Sex	Fem	Mal	Both	Unsexed		
Maximum size observed	40	38,5			Reproduction season	Late fall-early winter
Size at first maturity	25,8				Reproduction areas	*
Recruitment size			17.5 - 18.5		Nursery areas	**

Parameters used (state units and information sources)

Sex	Both							
Growth model	VBGE							
Data source	***							
L_{∞} (growth)	39,6							
K (growth)	0,44							
t_0 (growth)	-0,35							
length-weight								
a (length-weight)	0,007							
b (length-weight)	3,0638							
sex ratio	0,54							
M	0,46							

Comments



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Assessment form

Sheet P1

General information about the fishery

Code: SOL1707G.

Data source*		Year (s)*	
Data aggregation (by year, average figures between years, etc.)*			

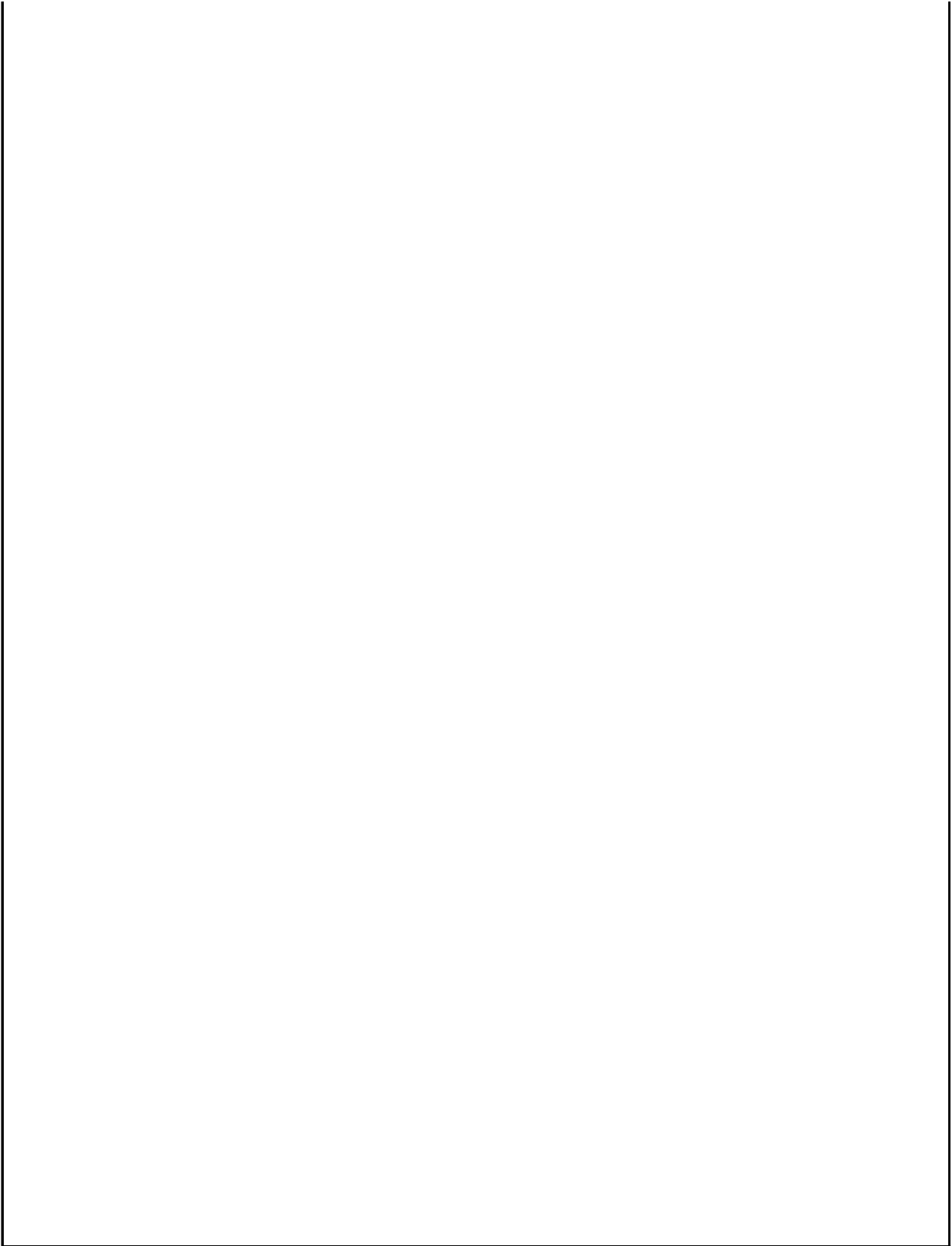
Fleet and catches (please state units)

	Country	GSA	Fleet Segment	Gear Class
Operational Unit 1*				
Operational Unit 2				
Operational Unit 3				
Operational Unit 4				
Operational Unit 5				

Operational Units*	Fleet (n° of boats)*	Catch (species assessed)	Other species caught	Discards (species assessed)	Discards (other species caught)	Effort units
Total						

Legal minimum size	
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Comments



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Assessment form

Sheet D
Diagnosis

Code: SOL1707G.

Reference points

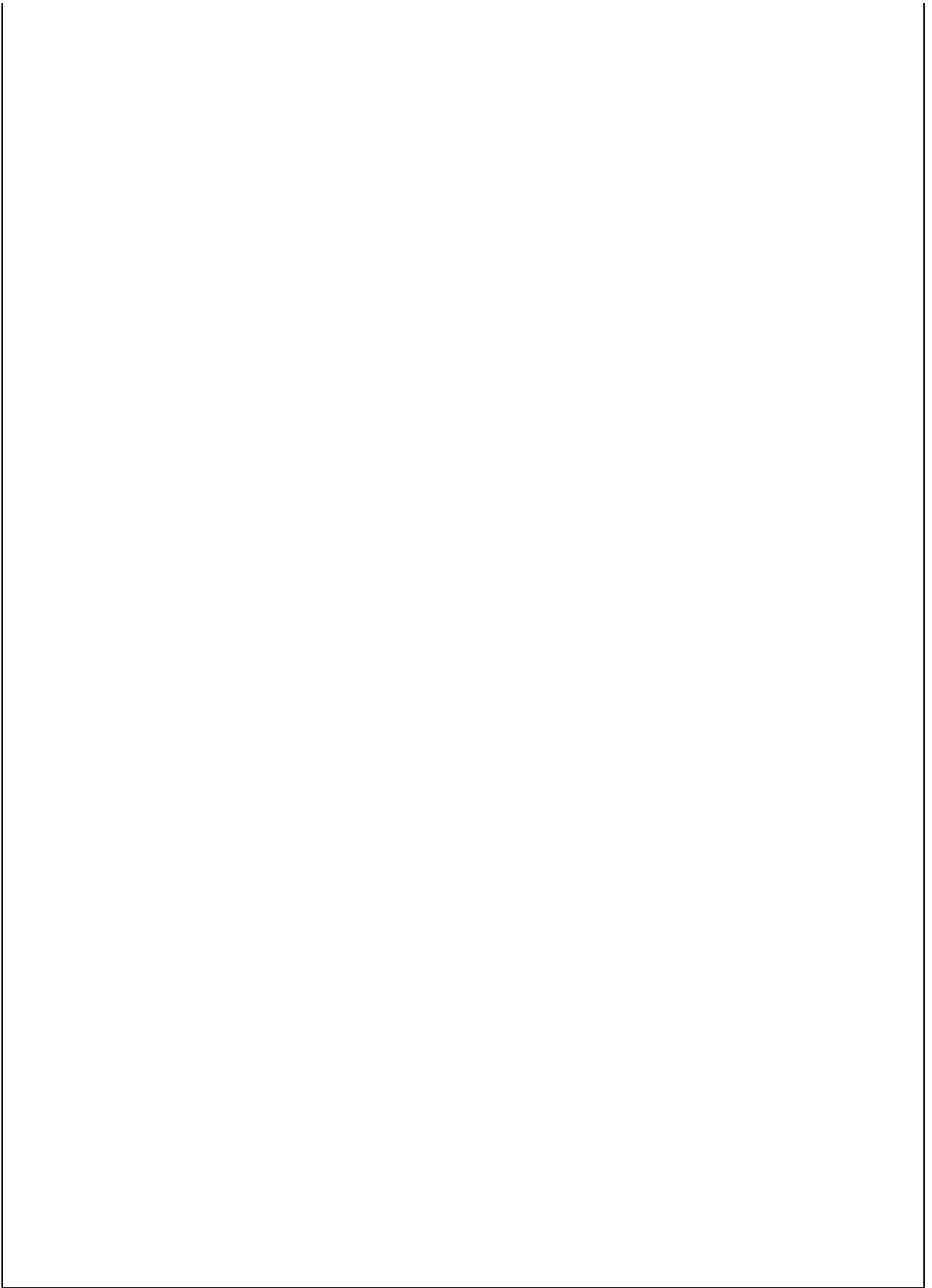
Criterion	Current value	Units	Reference Point	Trend	Comments
B	1600	t			
SSB	600	t			
F	0.77				
Y					
CPUE					

Stock Status* Use one (or both) of the following two systems for the stock assessment status description

Unidimensional	<input checked="" type="radio"/> ? - (or blank) Not known or uncertain. Not much information is available to make a judgment;
	<input type="radio"/> U - Underexploited, undeveloped or new fishery. Believed to have a significant potential for expansion in total production;
	<input type="radio"/> M - Moderately exploited, exploited with a low level of fishing effort. Believed to have some limited potential for expansion in total production;
	<input type="radio"/> F - Fully exploited. The fishery is operating at or close to an optimal yield level, with no expected room for further expansion;
	<input type="radio"/> O - Overexploited. The fishery is being exploited at above a level which is believed to be sustainable in the long term, with no potential room for further expansion and a higher risk of stock depletion/collapse;
	<input type="radio"/> D - Depleted. Catches are well below historical levels, irrespective of the amount of fishing effort exerted;
	<input type="radio"/> R - Recovering. Catches are again increasing after having been depleted or a collapse from a previous;

Bidimensional	Exploitation rate		Stock abundance	
	<input type="radio"/> No or low fishing	<input type="radio"/> Virgin or high abundance	<input type="radio"/> Depleted	
	<input type="radio"/> Moderate fishing	<input checked="" type="radio"/> Intermediate abundance	<input type="radio"/> Uncertain / Not assessed	
	<input type="radio"/> High fishing mortality	<input type="radio"/> Low abundance		
	<input checked="" type="radio"/> Uncertain / Not assessed			

Comments



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Assessment form

Sheet Z

Objectives and recommendations

Code: SOL1707G.

Management advice and recommendations*

The lack of precautionary reference points (Fpa and Bpa) for sole in the Mediterranean Sea, as well as the impossibility of estimating them from the rapido trawl surveys due to the short data series, do not allow to evaluate the stock status and to provide precise advices on the management of fishing effort on the basis of the obtained values of F and E.

However, data from trawl surveys, associated with those on landings and fishing effort derived from fish markets auction documents (1996-2006) as well as with information on fishing areas obtained through direct interviews at the landing sites (2005-2006), evidence that:

- catches strictly depend on the recruitment success, mainly including juveniles (age classes from 0+ to 2+);
- the recruitment can strongly fluctuate, as happened in the two survey years, and this might be related both to the SSB level and to environmental variables, since sole juveniles spend a part of their lifespan in marine coastal areas as well as within estuarine and lagoon systems;
- the increase in fishing effort did not negatively affect LPUEs in the overall period, although a general LPUE reduction was recorded in the last four years;
- SSB remained constant in the two survey years; this might be related to the fact that in late fall - winter the main spawning area located in the northern Adriatic Sea (within meridians 13°00' and 14°20' E and parallels 44°10' and 45°20' N) is not exploited by the Italian fleets, while it is only partially exploited by the Croatian set netters.

The above ascertainment suggest that:

- the safeguard of spawning areas, both in spatial and temporal terms, might be crucial for the sustainability of the sole stock in the Adriatic Sea;
- taking into account that the recruitment biomass can strongly fluctuate, at a precautionary level an increase of fishing effort should be unwise;
- the continuation of the surveys and their extension to the overall Adriatic Sea (GSA 17 and GSA 18) would be also strongly advisable to monitor the status of the resource on time.

Abstract for SCSA reporting

Authors	G. Fabi*, O. Giovanardi**,	Year	2007
Species Scientific name	Solea vulgaris - SOL Source: GFCM Priority Species		
Geographical Sub-Area	17 - Northern Adriatic		

Fisheries (brief description of the fishery)*

Besides to be included in the otter trawler multi-species catches, in the Adriatic Sea the sole represents the main target species of set nets (both gill nets and trammel nets) and rapido trawl (a sort of beam trawl having a mouth made of an iron frame provided with 3-5 skids and a toothed bar on its lower side). The fishing pressure applied by rapido trawlers and set netters on the Adriatic sole stock has increased in the last ten years in terms of either fishing effort (number of vessels, fishing time and engine power), efficiency of the gears and exploitation of new fishing grounds thanks to the use of advanced navigation equipment (e.g. GPS). This pressure, currently mainly due to the Italian fleets operating in the national and international waters, is likely to further increase in the next few years owing to fishery development in the emerging countries of the eastern Adriatic coast.

Source of management advice***(brief description of material -data- and methods used for the assessment)**

- Experimental catches from rapido trawl surveys in the area extending from Trieste to the Pomo Pit northern limit and from the Italian coast to the Croatian one, for a total trawlable surface of 44,880 km² (depth range 5 - 143 m);
- landing data from rapido trawlers (fish market auction documents; sampling of landings; biological sampling of landings), otter trawlers (fish market auction documents; sampling of landings; biological sampling of landings), and set netters (sampling of landings; biological sampling of landings) along the Italian coast from Trieste to San Benedetto del Tronto;
- direct interviews at the landing sites to get information on the fishing grounds along the Italian coast from Trieste to San Benedetto del Tronto.

Stock Status*

? - (or blank) Not known or uncertain. Not much information is available to make a judgment;

Exploitation rate

Uncertain / Not assessed

Stock abundance

Intermediate abundance

Comments

Management advice and recommendations*

The lack of precautionary reference points (F_{pa} and B_{pa}) for sole in the Mediterranean Sea, as well as the impossibility of estimating them from the rapido trawl surveys due to the short data series, do not allow to evaluate the stock status and to provide precise advices on the management of fishing effort on the basis of the obtained values of F and E .

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The above ascertainment suggest that:

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- taking into account that the recruitment biomass can strongly fluctuate, at a precautionary level an increase of fishing effort should be unwise;
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