SAC GFCM
Sub-Committee on Stock Assessment

Date*	**22**	**October**	**2009**	**Code***	**SBR0309Sad**

Authors*

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Affiliation*

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Species Scientific name*

1 ***Pagellus bogaraveo - SBR***
Source: GFCM Priority Species

2
Source: -

3
Source: -

Geographical area*

Moroccan coast

Geographical Sub-Area (GSA)*

03 - Southern Alboran Sea

Combination of GSAs
1
2
3

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Assessment form

Sheet #0

Basic data on the assessment

Code: SBR0309Sad

Date*	22	Oct	2009	Authors*	Sadia BELCAID

Species Scientific name*	Pagellus bogaraveo - SBR	Species common name*	Blackspot seabream

Data Source

GSA*	03 - Southern Alboran Sea	Period of time*	2005-2007

Description of the analysis

Type of data*	Length frequencies	Data source*	Longliners caostal fishery landing sampling
Method of assessment*	LCA	Software used*	VIT (lleonard and salat, 1992)

Sheets filled out

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

Comments, bibliography, etc.

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Assessment form — **Sheet B** — **Biology of the species**

Code: SBR0309Sad

Biology

Somatic magnitude measured (LH, LC, etc)*		LT		Units*	cm

Sex	Fem	Mal	Both	Unsexed		
Maximum size observed			53		Reproduction season	
Size at first maturity			25		Reproduction areas	
Recruitment size					Nursery areas	

Parameters used (state units and information sources)

			Sex			
		Units	female	male	both	unsexed
Growth model	L∞	cm			53.9	
	K	an-1			0.128	
	t0	an			-1.02	
	Data source	Krug, H.M, 1989 (Spain)				
Length weight relationship	a				0.0124	
	b				3, 1370	
	M				0.2	

sex ratio (mal/fem)	

Comments

The growth parameters and the length weight parameters are collected from fishbase

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Assessment form

Sheet P1
General information about the fishery

Code: SBR0309Sad

Data source*	National office of fishing (ONP)	Year (s)*	2005-2007

Data aggregation (by year, average figures between years, etc.)*	Average

Fleet and catches (please state units)

	Country	GSA	Fleet Segment	Fishing Gear Class	Group of Target Species	Species
Operational Unit 1*	MAR	03	I - Long line (12-24 metres)	09 - Hooks and Lines	33 - Demersal shelf species	SBR
Operational Unit 2						
Operational Unit 3						
Operational Unit 4						
Operational Unit 5						

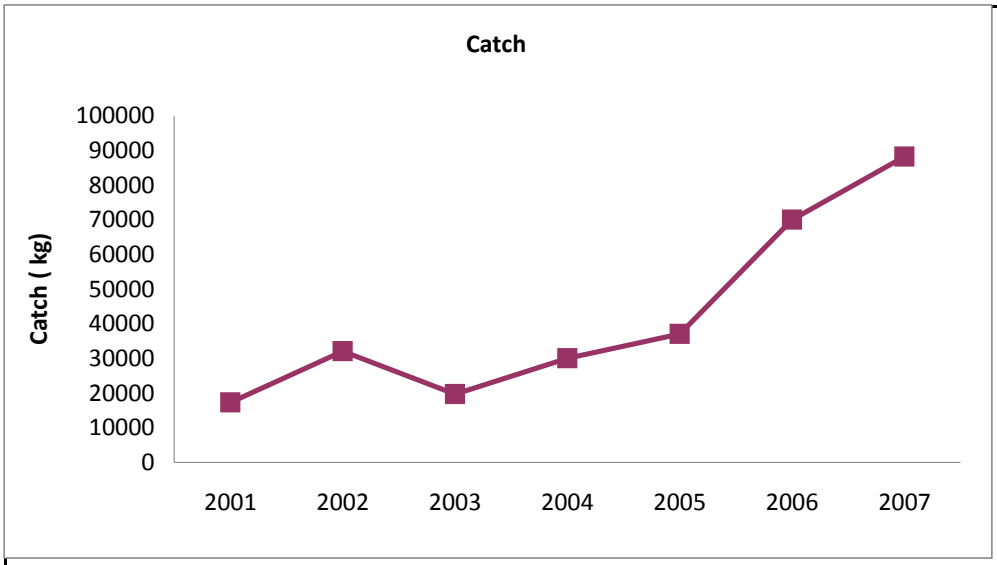
Operational Units*	Fleet (n° of boats)*	Kilos or Tons	Catch (species assessed)	Other species caught	Discards (species assessed)	Discards (other species caught)	Effort units
MAR 03 I 09 33 - SBR	108	Tons	65				
Total	108		65				

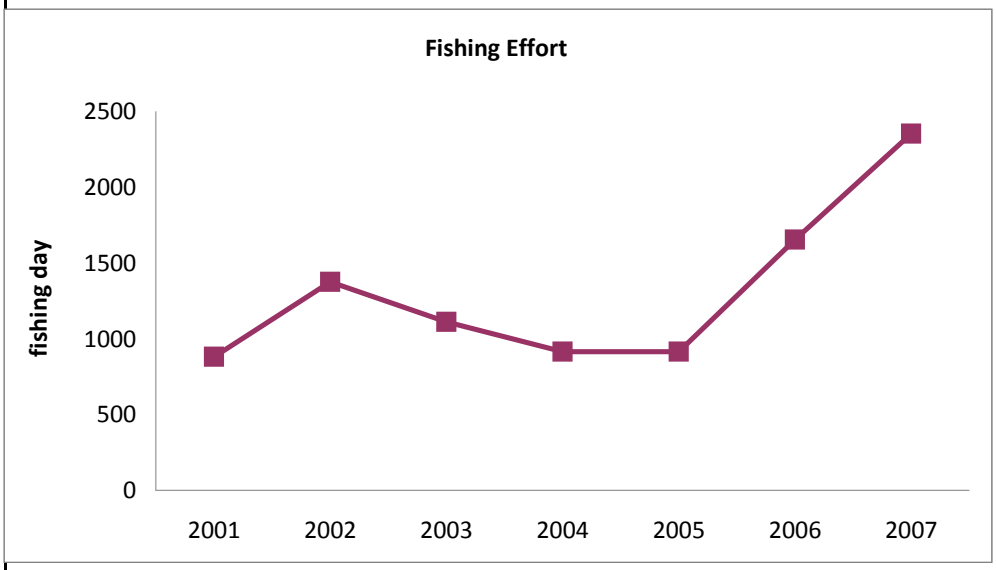
Legal minimum size	

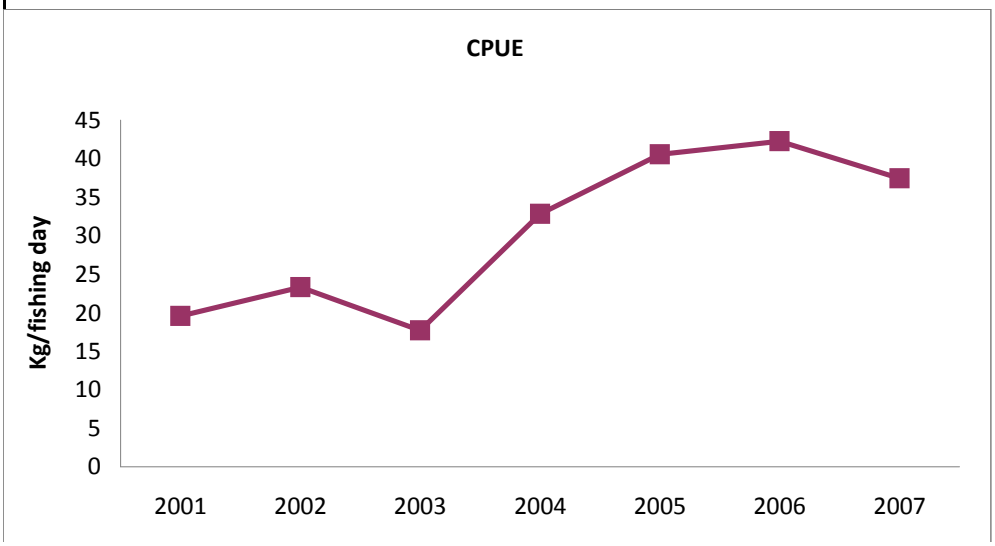
Comments

The system of collecting statistics data had been changed in 2004

Comments


Catch
Catch (kg)
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
2001
2002
2003
2004
2005
2006
2007


Fishing Effort
fishing day
2500
2000
1500
1000
500
0
2001
2002
2003
2004
2005
2006
2007


CPUE
Kg/fishing day
45
40
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
2006
2007

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Assessment form

Sheet P2a
Fishery by Operational Unit

Code: SBR0309Sad

Data source*	INRH, ONP, DPM	OpUnit 1*	MAR 03 I 09 33 - SBR

Time series

Year*	2005	2006	2007			
Catch	37	70	80			
Minimum size	23	29	24			
Average size Lc	33.32	38.87	32.33			
Maximum size	51	53	46			
Fleet	108	99	114			

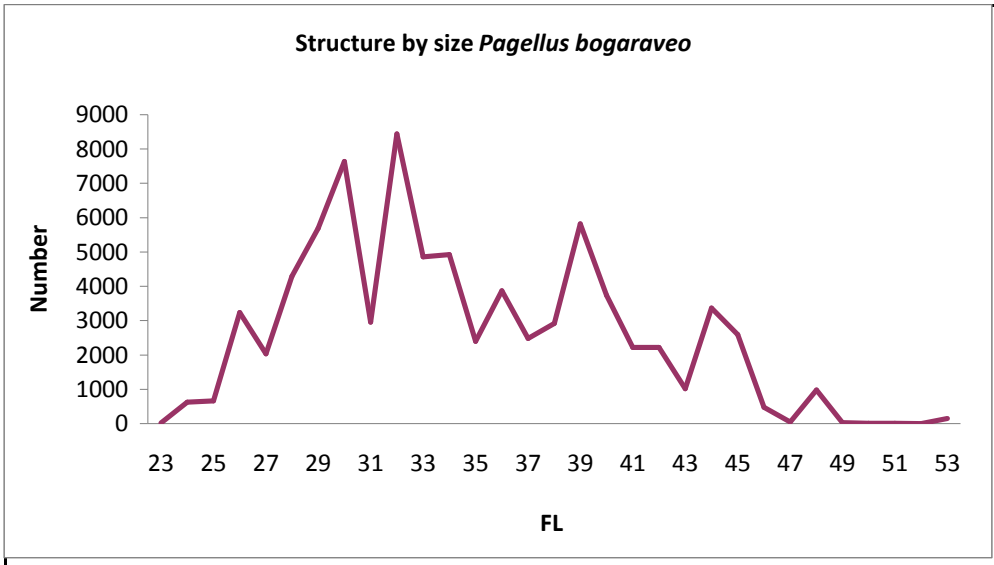
Year						
Catch						
Minimum size						
Average size Lc						
Maximum size						
Fleet						

Selectivity

L25	
L50	
L75	
Selection factor	

Remarks

Structure by size or age



Data source*	Ministery of Fishery and Agriculture	OpUnit 1*	MAR 03 I 09 33 - SBR

Regulations in force and degree of observance of regulations

Interdiction of fishing under 80 m deep in the aerea between Tangier and Al Hoceima and under 3 miles in the area between Al Hoceima and Saidia

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Accompanying species

Heliconius dactylopteris, Scorpaena scrofa, Epinephelus caninus.

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Assessment form

Sheet A1
Indirect methods: VPA, LCA

Code: SBR0309Sad

Sex*	both

Analysis # *	LCA

Time series

Data	Size	Age
(mark with X)	X	

Model	Cohorts	Pseudocohorts
(mark with X)		X

Equation used	Standard VPA	Tunig method	
# of gears	1	Software	VIT (Lleonard and Salat, 1992)
$F_{terminal}$	0.5		

Population results (please state units)

	Sizes	Ages		Amount	Biomass
Minimum	23		Recruitment	4979835543	
Average	23.56		Average population		45869517820
Maximum	53		Virgin population		
Critical	29		Turnover		35.03

Average mortality

		Gear					
	Total						
F_1	0.199	F1 = Mean F					
F_2	0.116	F2 = Global F					
Z							

(F1 and F2 represent different possible calculations. Please state them)

Comments

---	Biomass	Percentage
Recruitment	4979835543	30,99
Growth	11087400464	69,01
Natural death	9173903564	57,1
Fishing	6893332443	42,9
R/B(mean)	10,86	
D/B(mean)	35,03	
B(max)/B(mean)	14,54	
B(max)/D	41,5	

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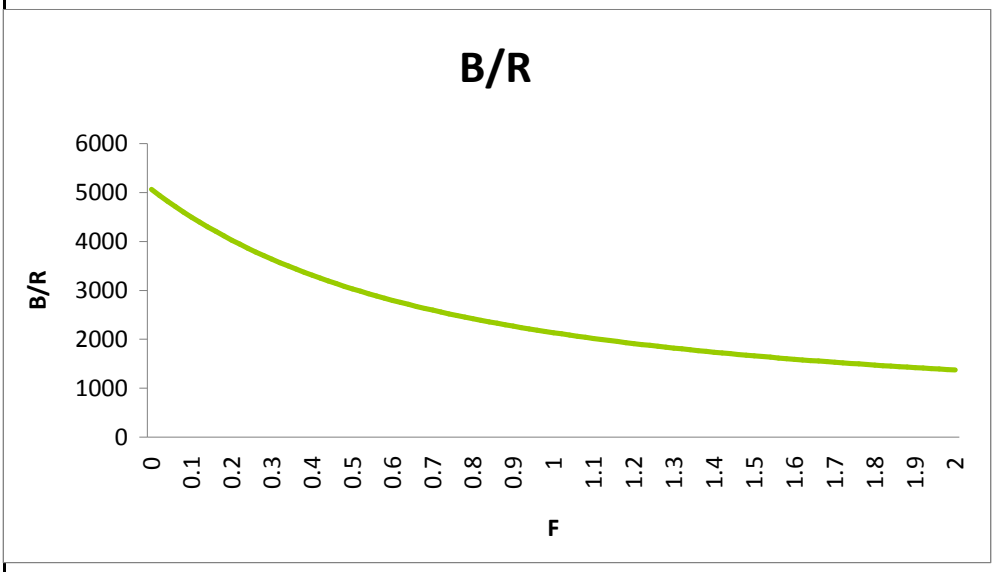
Assessment form	**Sheet A2** **Indirect methods: data**

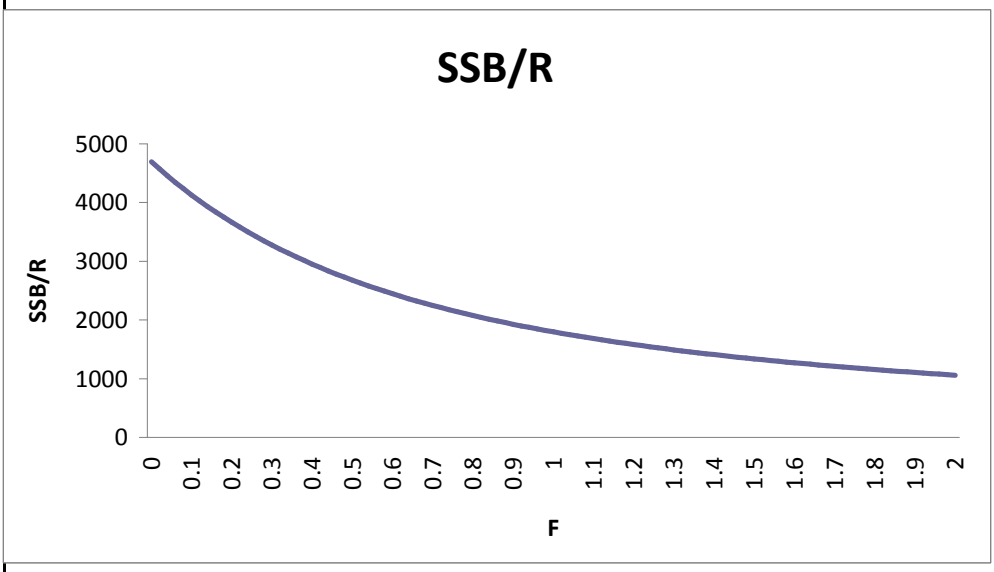
Code: SBR0309Sad

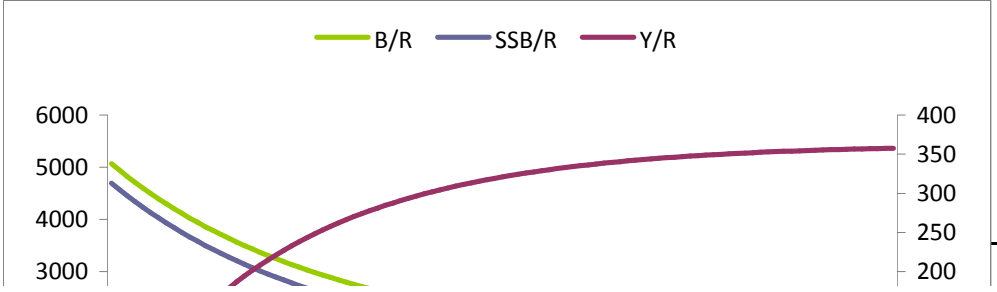
Sex*	Both	Gear*	Hooks and lines	Analysis # *	VPA

Data source	

Data





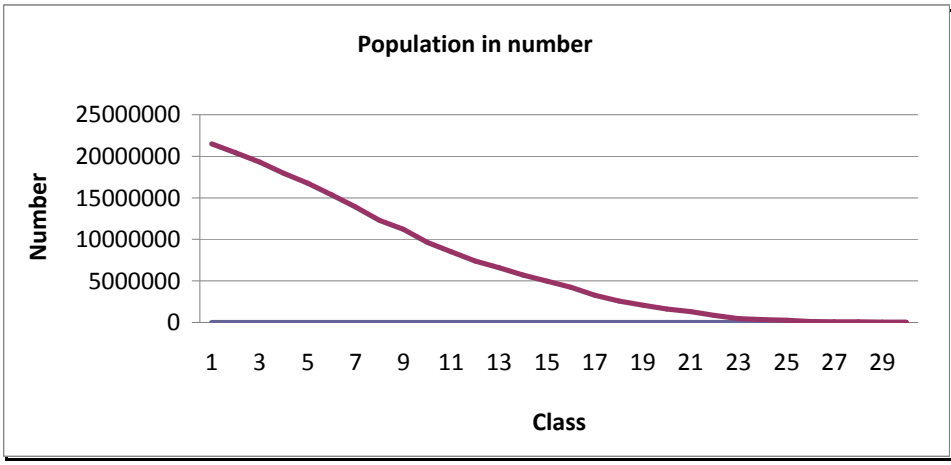


SAC GFCM - Sub-Committee on Stock Assessment (SCSA)	
Assessment form	Sheet A3 Indirect methods: VPA results

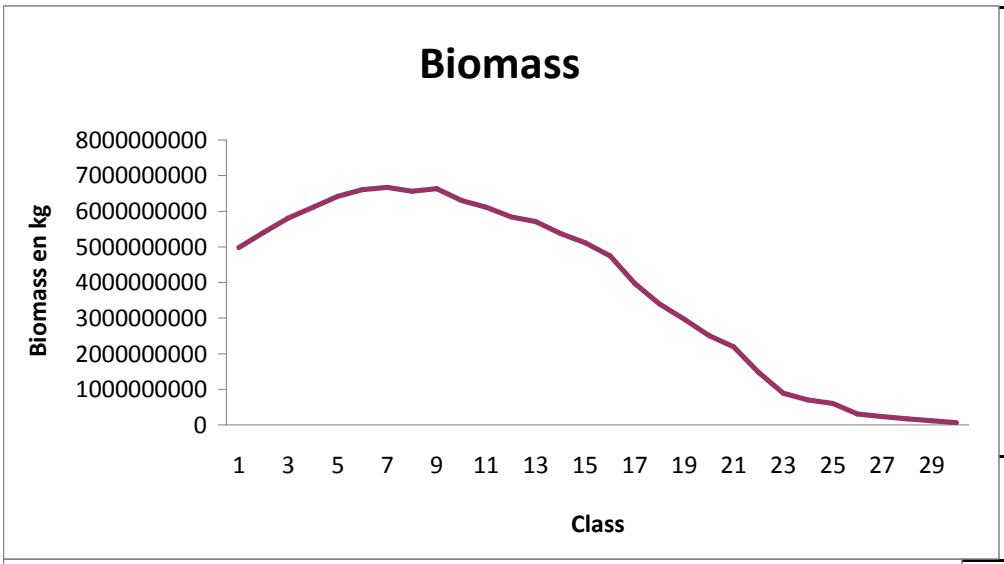
Code: SBR0309Sad

Sex*	BOTH	Gear*	Hooks and line	Analysis #*	VPA

Population in figures



Population in biomass



SAC GFCM - Sub-Committee on Stock Assessment (SCSA)	
Assessment form	**Sheet Y** **Indirect methods: Y/R**

Code: SBR0309Sad

Sex	UNSEXED	Analysis #	

# of gears	TRAWL	Software	VIT

Parameters used

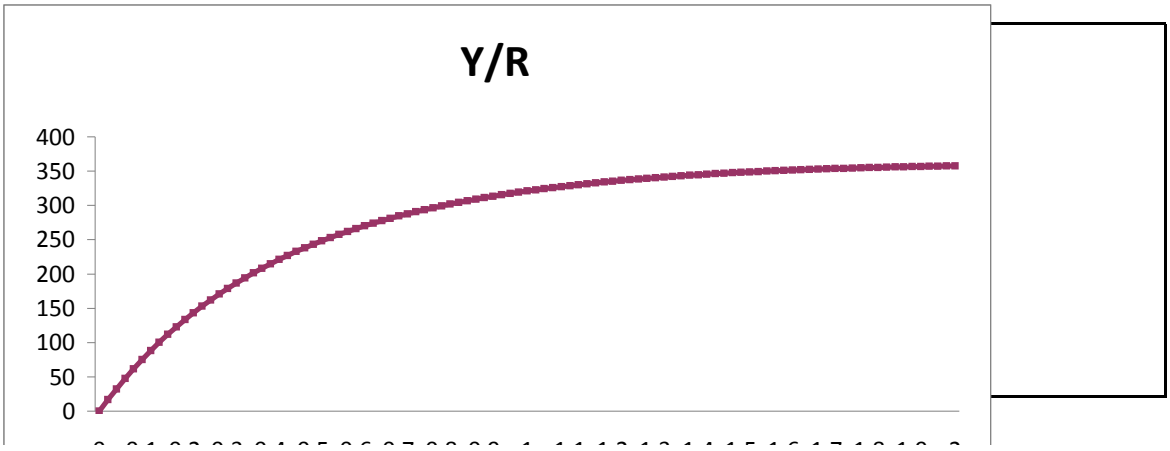
Vector F	0; 0,012; 0,063; 0,041; 0,09;0,126;0,126;0,182;0,182;0,075;0,232;0,147;0,162;0,085;0,149;0,
Vector M	0.2
Vector N	

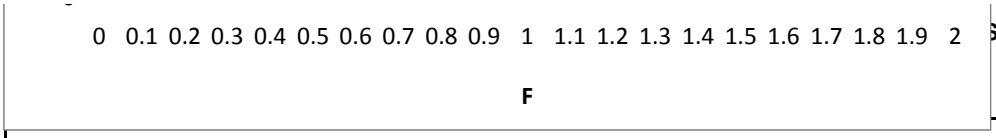
Model characteristics

Results

	Total	Gear			
Current YR	320.905				
Maximum Y/R					
Y/R 0.1					
F_{max}					
$F_{0.1}$	0.2				
Current B/R	2135.36				
Maximum B/R					
B/R 0.1					

Comments





The value of F0, 1 = 0.2, it seems that it is doubtful that must be verified

SAC GFCM - Sub-Committee on Stock Assessment (SCSA)	
Assessment form	**Sheet D Diagnosis**

Code: SBR0309Sad

Indicators and reference points

Criterion	Current value	Units	Reference Point	Trend	Comments
B	5E+10				
SSB	1797.2				
F	0.199				
Y					
CPUE	37.43				

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

Unidimensional

☐	? - (or blank) **Not known or uncertain**. Not much information is available to make a judgment;
☐	U - **Underexploited, undeveloped or new fishery**. Believed to have a significant potential for expansion in total production;
☉	M - **Moderately exploited**, exploited with a low level of fishing effort. Believed to have some limited potential for expansion in total production;
☐	F - **Fully exploited**. The fishery is operating at or close to an optimal yield level, with no expected room for further expansion;
☐	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;
☐	D - **Depleted**. Catches are well below historical levels, irrespective of the amount of fishing effort exerted;
☐	R - **Recovering**. Catches are again increasing after having been depleted or a collapse from a previous;

Bidimensional

Exploitation rate

☐	No or low fishing
☉	Moderate fishing
☐	High fishing mortality
☐	Uncertain / Not assessed

Stock abundance

☐	Virgin or high abundance
☐	Intermediate abundance
☐	Low abundance

☐	Depleted
☐	Uncertain / Not assessed

Comments

The result of the model show that this species is moderately exploited but the fishing effort should do not be increased in order to maintain a sustainable exploitation

Code: SBR0309Sad

Management advice and recommendations*

For precautionary measurement, it is recommended to maintain the effort at the current level.

Advice for scientific research*

Accomplish the artisanal and longliners fishery landing sampling in order the estimate the biologic parameters for Pagellus bogaraveo in Moroccan coast, with the possible under the regional support.