

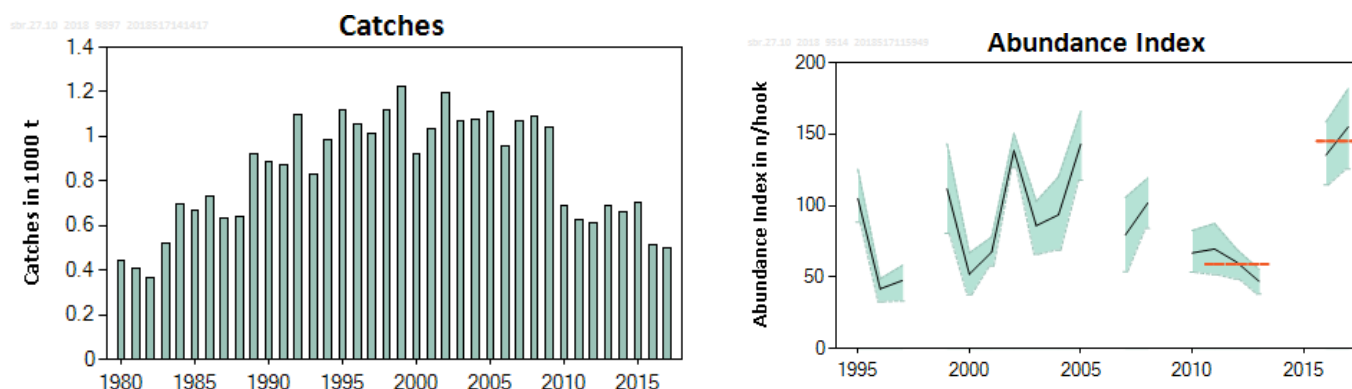
## Blackspot sea bream (*Pagellus bogaraveo*) in Subarea 10 (Azores grounds)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, catches should be no more than 576 tonnes in 2019.

### Stock development over time

Catches have been lower since 2010 compared to 1989–2009. Survey data are variable but show an increase during the last two years, compared to the previous available indices (2010–2013).




**Figure 1** Blackspot seabream in Subarea 10. Left: catches (in thousand tonnes) from Azores 10.a. Right: Relative abundance index from bottom longline survey (ARQDAÇO). The dotted horizontal lines indicate the average relative abundance index of the respective year range (last two and preceding three years) used to calculate the advice.

### Stock and exploitation status

ICES cannot assess the stock and exploitation status relative to MSY and PA reference points because the reference points are undefined.

**Table 1** Blackspot seabream in Subarea 10. State of the stock and fishery relative to reference points.

Blackspot seabream in Subarea 10: State of the stock and fishery relative to reference points.										
		Fishing pressure				Stock size				
		2015	2016	2017		2015	2016	2017		
Maximum sustainable yield	$F_{MSY}$	?	?	?	Unknown	$MSY B_{trigger}$	?	?	?	Undefined
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Unknown	$B_{pa}, B_{lim}$	?	?	?	Undefined
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	?	?		Increasing

## Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). The Azorean bottom longline survey (ARQDAÇO) was used as the index of stock development. The advice is based on a comparison of the two latest index values (index A) with the three preceding values (index B), multiplied by the recent advised catches.

The index is estimated to have increased by more than 20% and thus the uncertainty cap was applied. The precautionary buffer was last applied in 2012. The index ratio has increased by more than 50%; therefore, no additional precautionary buffer was applied. Discarding is considered negligible.

**Table 2** Blackspot seabream in Subarea 10. The basis for the catch scenarios\*.

Index A (2016–2017)		145
Index B (2011–2013) (2014–2015 missing)		59
Index ratio (A/B)		2.5
Uncertainty cap	Applied	1.20
Advised catches for the years 2017–2018 issued in 2017		480 t
Discard rate		Negligible
Precautionary buffer	Not applied	-
Catch advice **		576 t
% Advice change ***		+20%

\*The figures in the table are rounded. Calculations were done with unrounded inputs and computed values may not match exactly when calculated using the rounded figures in the table.

\*\* [Advice for 2017–2018 × Uncertainty cap].

\*\*\*Advice value for 2019 relative to advice value for 2018.

The advised catch is higher than that advised for 2018 because the abundance index has increased.

## Basis of the advice

**Table 3** Blackspot seabream in Subarea 10. The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no management plan for blackspot seabream in this area.

## Quality of the assessment

In the current assessment, the entire survey abundance index series was re-calculated excluding the statistical area of the western islands (Flores and Corvo), because this statistical area had not been covered in some years.

Survey results show an increase in the relative abundance, the 2017 value being the highest value recorded since the start of the time-series in 1995. The survey covers all island shelves, except the Flores and Corvo islands, and most of the seamounts where blackspot seabream is known to occur in Subdivision 10.a.2. The index for 2017 shows the same increase in all survey strata.

Although the management area considered covers all of Subarea 10, the proportion of the stock abundance occurring outside of Subdivision 10.a.2 is minor, if not non-existent.

## Issues relevant for the advice

Given the interannual variability of the abundance index for such a long-lived species and the fact that two of the years that would normally be used in the calculation are missing (2014–2015), advice will be given for one year.

## Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 4** Blackspot seabream in Subarea 10. The basis of the assessment.

ICES stock data category	3 ( <a href="#">ICES, 2016</a> )
Assessment type	Survey-based assessment indicates trends (ICES, 2018)
Input data	Survey relative abundance index (longlining survey ARQDAÇO)
Discards and bycatch	Discarding is considered negligible.
Indicators	None
Other information	Last benchmarked in 2010 (WKDEEP; <a href="#">ICES, 2010</a> ).
Working group	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources ( <a href="#">WGDEEP</a> )

## Information from stakeholders

There is no information from the stakeholders for this stock.

## History of the advice, catch, and management

**Table 5** Blackspot seabream in Subarea 10. ICES advice, the agreed TAC, and landings. Weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	EU TAC Subarea 10	ICES landings Subarea 10
2003	*	-	1136	1068
2004	*	-	1136	1075
2005	*	-	1136	1113
2006	*	-	1136	958
2007	*	-	1136	1070
2008	*	-	1136	1089
2009	Constrain catches to average catches 2003–2007	1050	1136	1042
2010	Biennial	1050	1136	687
2011	Less than 1050 t and a reduction in catches should be considered	1050	1136	624
2012	No new advice, same as 2011	1050	1136	613
2013	Reduce catches by 40%	≤ 400	1022	692
2014	No new advice, same as 2013	≤ 400	922	663
2015	Same catch advice as 2013	≤ 400	678	701
2016	No new advice, same as 2013	≤ 400	507	515
2017	Precautionary approach (same value as advised catches for 2016)	≤ 480	507	499
2018	Precautionary approach (same value as advised catches for 2016)	≤ 480	507	
2019	Precautionary approach	≤ 576		

\* Previous to 2008, the advice was for the entire ICES area.

## History of catch and landings

**Table 6** Blackspot seabream in Subarea 10. Catch distribution by fleet in 2017 as estimated by ICES.

Total catch (2017)	Landings	Discards
499 tonnes	100% longliners and hand line	No discards
	499 tonnes	

**Table 7** Blackspot seabream in Subarea 10. History of commercial ICES estimates of catches for Subarea 10 (Azores ground).

Year	Subarea 10
1988	637
1989	924
1990	889
1991	874
1992	1090
1993	830
1994	989
1995	1115
1996	1052
1997	1012
1998	1119
1999	1222
2000	947
2001	1034
2002	1193
2003	1068
2004	1075
2005	1113
2006	958
2007	1063
2008	1089
2009	1042
2010	687
2011	624
2012	613
2013	692
2014	663
2015	701
2016	515
2017	499

**Table 8.** Blackspot seabream in Subarea 10. Catches inside and outside the NEAFC Regulatory Area (RA) as estimated by ICES. Weights are in tonnes.

Year	Inside the NEAFC RA	Outside the NEAFC RA	Total catch
2014	0	663	663
2015	0	701	701
2016	0	515	515
2017	0	499	499

## Summary of the assessment

**Table 9** Blackspot seabream in Subarea 10. Assessment summary. Relative abundance index (n/hook) from the Azorean bottom longline survey (ARQDAÇO).

Year	Abundance index (n/hook)	High	Low
1995	105	125	88
1996	42	49	33
1997	48	58	33
1998			
1999	112	143	80
2000	52	67	38
2001	67	78	58
2002	138	150	126
2003	86	103	66
2004	94	120	69
2005	143	166	118
2006			
2007	79	106	54
2008	102	119	84
2009			
2010	67	83	53
2011	70	87	52
2012	60	69	49
2013	47	55	38
2014			
2015			
2016	135	158	114
2017	155	182	125

## Sources and references

- ICES. 2010. Report of the Benchmark Workshop on Deep-water Species (WKDEEP), 17–24 February 2010, Copenhagen, Denmark. ICES CM 2010/ACOM:38. 247 pp.
- ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM 68. 42 pp.
- ICES. 2016. Advice basis. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.
- ICES. 2018. Report of the Working Group on the Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP), 11–18 April 2018, ICES HQ, Copenhagen, Denmark. ICES CM 2018/ACOM:14. 624 pp.