

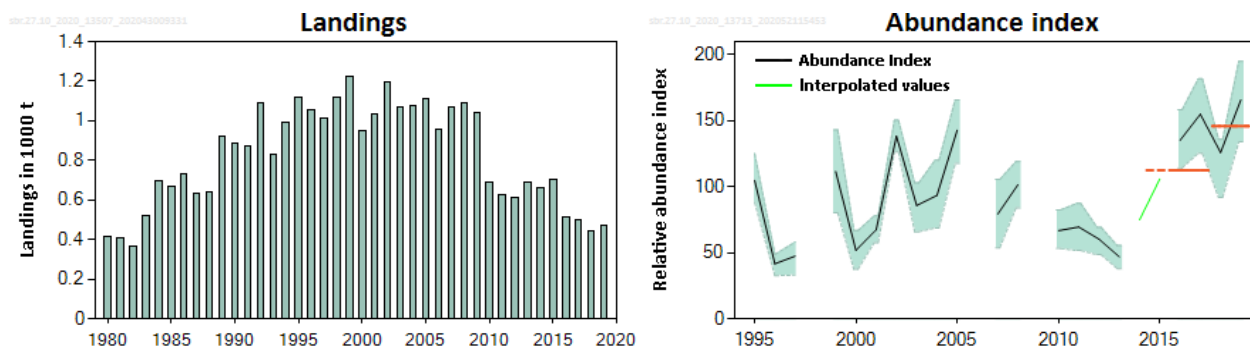
## Blackspot sea bream (*Pagellus bogaraveo*) in Subarea 10 (Azores grounds)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, catches in 2021 should be no more than 610 tonnes.

Note: This advice sheet is abbreviated due to the Covid-19 disruption. The previous advice issued for 2020 is attached as Annex 1.

### Stock development over time



**Figure 1** Blackspot seabream in Subarea 10. Left: Landings (in thousand tonnes) from Azores Division 10.a. Right: Relative abundance index from bottom longline survey (ARQDAÇO). The orange horizontal lines indicate the average relative abundance index of the respective year range (last two and preceding three years) used to calculate the advice. Shaded areas indicate 95% confidence intervals.

### Stock and exploitation status

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

		Fishing pressure			Stock size					
		2017	2018	2019	2017	2018	2019			
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

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

Index A (2018–2019)		145.71
Index B (2017–2015) (2015 interpolated)		132.07
Index ratio (A/B)		1.10
Uncertainty cap	Not applied	
Advised catches for the year 2020		553 tonnes
Discard rate		Negligible
Precautionary buffer	Not applied	
Catch advice **		610 tonnes
% advice change ***		+10%

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

\*\* [Advised catches for 2020] × [Index ratio].

\*\*\*Advice value for 2021 relative to the advice value for 2020.

## Issues relevant for the advice

Discarding was estimated at 6% in 2018; however, due to the high survivorship (RDFAAR, 2018), the corresponding mortality is likely smaller than 5% and discarding is therefore considered to be negligible.

This stock is classified as Category 4 in the NEAFC categorization of deep-sea species/stocks, which implies that fisheries are primarily restricted to coastal state exclusive economic zones (EEZs). Therefore, management measures are not taken by NEAFC unless complementary to coastal state conservation and management measures (NEAFC, 2016).

## History of the advice, catch, and management

**Table 3** 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 tonnes 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	920	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	517	499
2018	Precautionary approach (same value as advised catches for 2016)	≤ 480	517	445
2019	Precautionary approach	≤ 576	576	474
2020	Precautionary approach	≤ 553	576	
2021	Precautionary approach	≤ 610		

\* Previous to 2009, the advice was for the entire ICES area.

**Table 4** 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	Proportion in NEAFC RA
2014	0	663	663	0
2015	0	701	701	0
2016	0	515	515	0
2017	0	499	499	0
2018	0	445	445	0
2019	0	474	474	0

### Summary of the assessment

**Table 5** Blackspot seabream in Subarea 10. Assessment summary. Relative abundance index (n hook<sup>-1</sup>) from the Azorean bottom longline survey (ARQDAÇO) and landings. High and low correspond to 95% confidence intervals.

Year	Relative abundance index	High	Low	Landings (tonnes)
1980				415
1981				407
1982				369
1983				520
1984				700
1985				672
1986				730
1987				631
1988				637
1989				924
1990				889
1991				874
1992				1090
1993				830
1994				989
1995	105	125	88	1115
1996	42	49	33	1052
1997	48	58	33	1012
1998				1119
1999	112	143	80	1222
2000	52	67	38	947
2001	67	78	58	1034
2002	138	150	126	1193
2003	86	103	66	1068
2004	94	120	69	1075
2005	143	166	118	1113
2006				958
2007	79	106	54	1070
2008	102	119	84	1089
2009				1042
2010	67	83	53	687
2011	70	87	52	624
2012	60	69	49	613
2013	47	55	38	692

Year	Relative abundance index	High	Low	Landings (tonnes)
2014	<i>75*</i>			663
2015	<i>106*</i>			701
2016	135	158	114	515
2017	155	182	125	499
2018	126	136	92	445
2019	166	195	134	474

\* Numbers in italics are interpolated values.

## Sources and references

Azores Autonomous Region (RDFAAR). 2018. Supporting evidence on a high survivability exemption to the landing obligation of blackspot seabream (*Pagellus bogaraveo*) captured by bottom hook and line in Central North Atlantic Waters (ICES sub-area X). Report presented under the Landing Obligation Joint Recommendation of the South Western Waters. 44 pp.

ICES. 2020. Working Group on the Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP), ICES Scientific Reports, 2:38. <http://doi.org/10.17895/ices.pub.6015>.

NEAFC. 2016. The NEAFC approach to conservation and management of deep-sea species and categorization of deep-sea species/stocks. Adopted at the 35th Annual Meeting, November 2016. <https://www.neafc.org/basictexts>.

*Recommended citation:* ICES. 2020. Blackspot sea bream (*Pagellus bogaraveo*) in Subarea 10 (Azores grounds). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, sbr.27.10. <https://doi.org/10.17895/ices.advice.5845>.