

Sea bass (*Dicentrarchus labrax*) in divisions 4.b–c, 7.a, and 7.d–h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, total removals[†] in 2024 should be no more than 2432 tonnes.

ICES notes the existence of a precautionary management plan, developed and adopted by one of the relevant management authorities for this stock.

ICES advice on conservation aspects

ICES has not identified any conservation aspects.

Stock development over time

Fishing pressure on the stock is below F_{MSY} , and spawning-stock size is below MSY $B_{trigger}$ and between B_{pa} and B_{lim} .

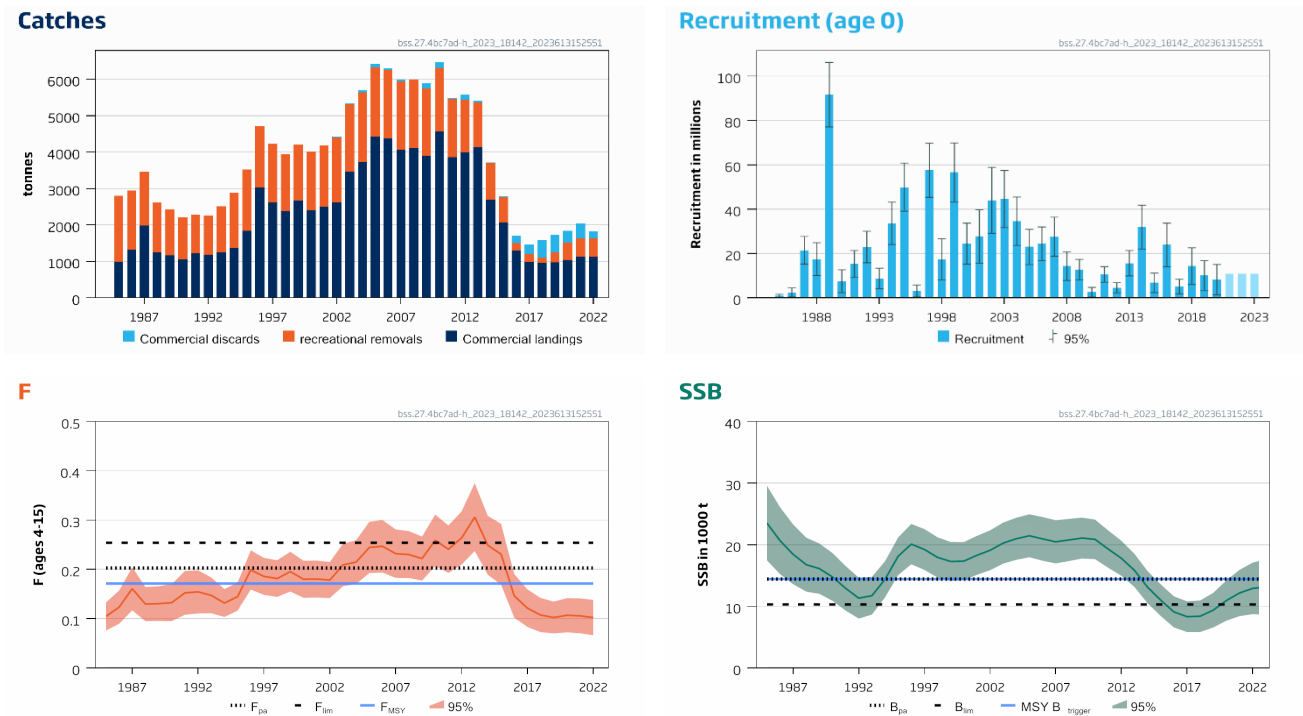


Figure 1 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Summary of the stock assessment. Recreational removals are model estimates based on a survey in 2012 and implemented management measures. Discard estimates are available since 2002. Fishing mortality (F) is shown for the combined commercial and recreational fisheries. The assumed recruitment values for 2021–2023 are shaded in a lighter colour.

Conservation status

ICES is not aware of any information on stock/species-specific conservation status.

[†]Total removals include both commercial and recreational catches, taking mortality of released fish into account (estimated at approximately 5%).

Catch scenarios

Table 1 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
F _{ages 4–15} (2023)	0.105	Total F, F _{sq} = F _{average} (2020–2022) (0.074) for commercial fishery, plus F _{rec} = 0.031*, assuming full compliance of recreational fisheries in 2023
SSB (2024)	12978	Short-term forecast; in tonnes
R _{age 0} (2021–2024)	10875	Geometric mean (2011–2020); in thousands
Total removals (2023)	1749	Short-term forecast fishing at F = 0.105; in tonnes
Total landings (2023)	1140**	Short-term forecast; in tonnes
Discards (2023)	100**	Short-term forecast; in tonnes
Recreational removals (2023)	509	Short-term forecast assuming an F _{rec} = 0.031 ; in tonnes

* Recreational F as estimated in 2012 (0.067, reduced [by 54%]) to account for management measures since 2012.

** The split of total commercial F into commercial landings and commercial discards in the interim year is estimated by the model.

Table 2 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Annual catch scenarios. All weights are in tonnes.

Basis	Total removals* (2024)	F _{total} (2024)	SSB (2025)	% SSB change**	% advice change ***
ICES advice basis					
MSY approach: F = F _{MSY} × SSB ₂₀₂₄ /MSY B _{trigger}	2432	0.154	11975	-7.7	-4.3
EU MAP [^] : F _{MSY} × SSB ₂₀₂₄ /MSY B _{trigger}	2432	0.154	11975	-7.7	-4.3
EU MAP [^] : F _{MSY upper} × SSB ₂₀₂₄ /MSY B _{trigger}	2432	0.154	11975	-7.7	-4.3
EU MAP [^] : F _{MSY lower} × SSB ₂₀₂₄ /MSY B _{trigger}	2042	0.128	12304	-5.2	-19.7
F = F _{MSY lower}	2256	0.142	12124	-6.6	-11.2
F = F _{MSY upper}	2683	0.171	11764	-9.4	5.5
F = F _{MSY}	2683	0.171	11764	-9.4	5.5
F = 0	0	0	14040	8.2	-100
F _{pa}	3132	0.20	11387	-12.3	23
F _{lim}	3825	0.25	10807	-16.7	51
SSB ₂₀₂₅ = B _{lim}	4418	0.30	10313	-21	74
SSB ₂₀₂₅ = B _{pa} ^{^^}					
SSB ₂₀₂₅ = MSY B _{trigger} ^{^^}					
F = F ₂₀₂₃	1698	0.105	12595	-3.0	-33
SSB ₂₀₂₅ = SSB ₂₀₂₄	1247	0.076	12978	0	-51

* Includes commercial catch and recreational removals (taking mortality of released fish into account, estimated at approximately 5%).

** SSB 2025 relative to SSB 2024.

*** Advice value for 2024 relative to the MSY value for 2023 (2542 tonnes).

[^] MAP multiannual plan (EU, 2019).

^{^^}The B_{pa} and MSY B_{trigger} options were left blank because B_{pa} and MSY B_{trigger} cannot be achieved in 2025, even with zero catch.

Basis of the advice

Table 3 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. The basis of the advice.

Advice basis	MSY approach
Management plan	ICES is aware of the multiannual management plan (MAP) that has been adopted by the EU for this stock (EU, 2019) and that ICES considers to be precautionary. There is no agreed shared management plan with UK for this stock, and ICES provides advice according to ICES MSY approach. Catch scenarios consistent with the MAP F _{MSY} ranges are provided.

Quality of the assessment

Fishery sampling rates have been variable over time for all countries. Limited sampling of the discards and recreational removals leads to uncertainty in catch data and increases the uncertainty in the assessment. The discard values are estimated from sampling programmes and more recently from a combination of sampling programmes and logbooks, where sampling is variable across fleets and years. Estimates of discards are available only from the early 2000s, but these do not cover all fisheries, are imprecise, and are only included for some fleets in the assessment.

The estimate of 1440 tonnes of recreational removals (including post-release mortality, estimated 5%) in 2012 is based on multiple surveys covering a range of years. As in previous years, the mortality rate from recreational removals for 1985–2014 (excluding 2012) was assumed to be the same as estimated for 2012. In the assessment, the mortality rate from recreational removals for 2015–2022 was derived by scaling down the F from 2012 to account for the management measures in these years, assuming full compliance.

Additional information on recreational removals from all countries is needed in order to improve these estimates and the stock assessment model.

Stock structure remains an issue, and connectivity with adjacent stocks is a source of uncertainty (ICES, 2023b).

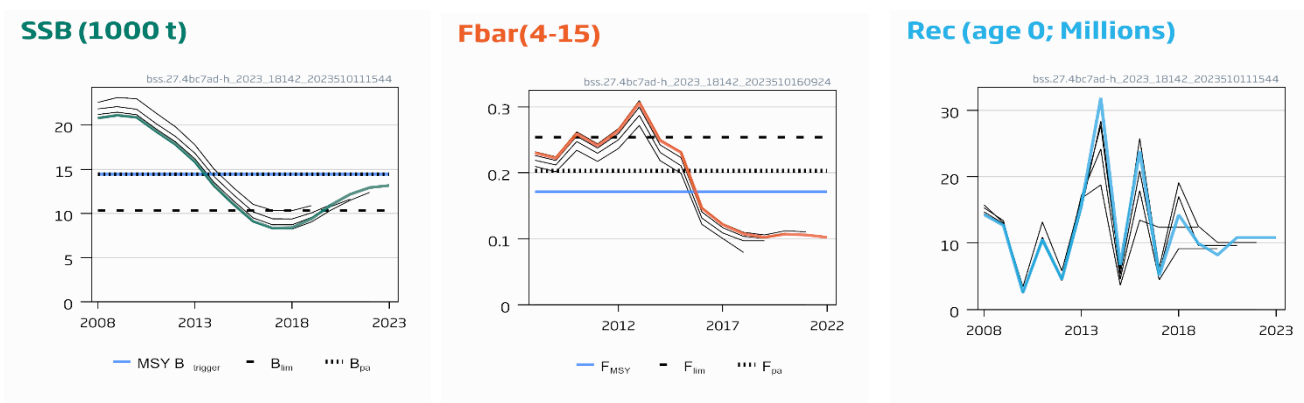


Figure 2 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Historical assessment results (final-year SSB estimates and final three years of recruitment assumptions are included).

Issues relevant to the advice

Following the prohibition of the directed sea bass fishery in 2015, discarding has increased. Sea bass is still being caught as bycatch. For the forecast, the discard ratio assumed is the estimate provided by the assessment model. The modelled estimated discards are much lower than the observed discards.

ICES notes that under the ICES MSY approach scenario, the SSB in 2025 is expected to decrease slightly, remaining below MSY $B_{trigger}$.

ICES does not provide any split in the catch scenarios table this year, as the recreational fishing pressure cannot be allocated in the absence of known management measures in 2024 (e.g. bag limit) and given the limited data on recreational removals.

Reference points

Table 4 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	14439	B_{pa} ; in tonnes	ICES (2019)
	F_{MSY}	0.1713	Stochastic simulations (EqSim)	ICES (2019)
Precautionary approach	B_{lim}	10313	B_{loss} (lowest value in the time-series, SSB in 2018 as estimated by the WGCSE 2019 assessment); in tonnes	ICES (2019)
	B_{pa}	14439	$B_{lim} \times 1.4$; in tonnes	ICES (2019)
	F_{lim}	0.254	Stochastic simulations (EqSim)	ICES (2019)
	F_{pa}	0.203	F_{P05} ; the F that leads to $SSB \geq B_{lim}$ with 95% probability	ICES (2019, 2021)
Management plan*	MAP MSY $B_{trigger}$	14439	MSY $B_{trigger}$; in tonnes	EU (2019)
	MAP B_{lim}	10313	B_{lim} ; in tonnes	EU (2019)
	MAP F_{MSY}	0.1713	F_{MSY}	EU (2019)
	MAP range F_{lower}	0.142	Consistent with ranges provided by ICES (2019), resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2019) and EU (2019)
	MAP range F_{upper}	0.1713	Consistent with ranges provided by ICES (2019), resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2019) and EU (2019)

* EU multiannual plan (MAP) for the Western Waters and adjacent waters (EU, 2019).

Basis of the assessment

Table 5 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023)
Assessment type	Age- and length-based analytical assessment (Stock Synthesis 3; NOAA Toolbox)
Input data	Commercial landings (international landings, ages, and length frequencies from catch sampling); commercial discards (UK bottom otter trawl and nets and combined French fleet, length frequencies from catch sampling); one recruit survey (UK Solent autumn survey [G9863], 1986–present, excluding 2010 and 2012); one bottom trawl survey (Channel Groundfish Survey [G3425], 1988–2014); one commercial tuning fleet (2001–present); growth and maturity data from sampling of commercial catches and surveys; natural mortality (inferred from life-history parameters and maximum observed ages).
Discards and bycatch	Discards included in the model and forecast for some of the fleets
Recreational	Used in the model and in the forecast
Indicators	None
Other information	Benchmarked in 2018 (ICES, 2018)
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

History of the advice, catch, and management

Table 6 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. History of ICES advice, and ICES estimates of landings, discards, and official landings. All weights are in tonnes.

Year	ICES advice	Catch corresponding to advice*	Official commercial landings	ICES commercial landings	ICES commercial discards [^]	ICES recreational removals
2000	-	-	2100	2407		
2001	-	-	2200	2500		
2002	No increase in effort or F	-	2400	2622	17	
2003	No increase in effort or F	-	2900	3459	16	
2004	No increase in effort or F	-	3000	3731	59	
2005	-	-	3200	4430	96	
2006	-	-	3396	4377	53	
2007	-	-	3521	4064	50	
2008	-	-	3027	4107	8	
2009	-	-	4288	3889	151	
2010	-	-	4952	4562	148	
2011	-	-	4183	3858	22	
2012	No increase in catch	-	3982	3987	157	1440
2013	20% reduction in catches (average of the last three years)	< 6000**	4243	4137	53	
2014	36% reduction in commercial landings (20% reduction, followed by 20% precautionary reduction)	< 2707**	2816	2682	25	
2015	MSY approach	< 115***	2081	2066	40	
2016	MSY approach	≤ 541***	1300	1295	199	
2017	Precautionary approach	0	1027	984	271	
2018	MSY approach	≤ 880 ^{^^}	931	948	482	
2019	MSY approach	≤ 1806 ^{^^^}	970	972	464	
2020	Management plan	1634–1946 ^{^^^}	1175	1042	325	
2021	Management plan	2000 (range 1680–2000) ^{^^^}	1275 ^{^^}	1126	412	
2022	MSY approach	≤ 2216 ^{^^^}	1273 ^{^^}	1126	196	
2023	MSY approach	≤ 2542 ^{^^^}				
2024	MSY approach	≤ 2432 ^{^^^}				

* Advice prior to 2014 was provided for sea bass in the Northeast Atlantic.

** Commercial landings.

*** Total landings (commercial and recreational landings).

[^] Incomplete for some fleets 2002–2008.

^{^^} Preliminary.

^{^^^} Includes commercial catch and recreational removals (taking mortality of released fish into account, estimated at approximately 5%).

History of the catch and landings

Table 7 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Catch distribution by fleet in 2022 as estimated by ICES.

Total catch	Commercial landings						Commercial discards	Recreational removals*
	Lines	Bottom trawlers	Other gears	Fixed/drift nets	Danish seine	Pelagic trawlers		
1831 tonnes	42 %	25%	3%	24%	7%	<1%	196 tonnes	509 tonnes
1126 tonnes								

* Derived from the 2012 survey estimate (1440 tonnes).

Table 8 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. History of commercial landings by country and ICES estimates of landings. All weights are in tonnes.

Year	Belgium	Denmark	Germany	France	UK	Netherlands	Channel Is.	Total	Total ICES
1985	0	0	0	620	105	0	18	743	994
1986	0	0	0	841	124	0	15	980	1319
1987	0	0	0	1226	123	0	14	1363	1980
1988	0	18	0	714	173	8	12	925	1239
1989	0	2	0	675	192	2	48	919	1161
1990	0	0	0	609	189	0	25	824	1063
1991	0	0	0	726	239	0	16	982	1227
1992	0	0	0	721	148	0	36	906	1186
1993	0	1	0	718	230	0	45	994	1255
1994	0	1	0	593	535	0	49	1178	1371
1995	0	1	0	801	708	0	69	1579	1835
1996	0	1	0	1703	563	8	56	2331	3022
1997	0	1	0	1429	561	1	74	2066	2620
1998	0	2	0	1363	488	48	79	1980	2390
1999	0	1	0	n/a	685	32	108	826	2670
2000	0	5	0	1522	407	60	130	2124	2407
2001	0	2	0	1619	458	77	80	2236	2500
2002	0	1	0	1580	627	96	73	2377	2622
2003	154	1	0	1903	586	163	84	2891	3459
2004	159	1	0	1883	617	191	159	3010	3731
2005	206	1	0	1937	512	327	220	3203	4430
2006	211	2	0	2116	736	308	23	3396	4377
2007	178	1	0	2075	873	376	18	3521	4064
2008	187	0	0	1506	934	380	20	3027	4107
2009	174	0	0	2904	801	395	15	4288	3889
2010	216	4	0	3441	879	399	14	4952	4562
2011	152	2	0	2688	928	395	17	4183	3858
2012	154	3	0	2492	946	376	12	3982	3987
2013	146	4	2	2868	841	370	12	4243	4137
2014	148	1	1	1322	1080	253	11	2816	2682
2015	40	0	0	1113	701	218	9	2081	2066
2016	23	0	1	545	551	156	24	1300	1295
2017	22	0	0	423	438	132	12	1027	984
2018	18	0	0	297	432	172	11	931	948
2019	19	0	0	309	411	209	22	970	972
2020	24	0	0	387	526	223	15	1175	1042
2021*	45	0	0	385	613	231	1	1275	1126
2022*	24	1	1	404	617	225	1	1273	1126

* Preliminary official landings.

Summary of the assessment

Table 9 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Assessment summary. Weights are in tonnes and recruitment in thousands. High and Low refer to 95% confidence intervals.

Year	Recruitment age 0			SSB			Total F _{ages 4–15}			F _{bar} commercial catch	F _{bar} recreational removals	Commercial landings	Commercial discards*	Recreational removals**
	Low	Value	High	Low	Value	High	Low	Value	High					
1985	73	845	1616	17475	23548	29621	0.076	0.105	0.133	0.037	0.067	994		1805
1986	444	2474	4504	15236	20676	26116	0.090	0.123	0.157	0.056	0.067	1318		1629
1987	15256	21485	27713	13597	18453	23309	0.117	0.161	0.205	0.093	0.068	1979		1483
1988	10046	17453	24860	12390	16773	21155	0.095	0.130	0.164	0.062	0.067	1239		1379
1989	77066	91611	106156	12037	16131	20224	0.095	0.131	0.166	0.063	0.067	1161		1274
1990	2299	7473	12647	10900	14781	18662	0.095	0.133	0.170	0.065	0.067	1064		1145
1991	9164	15253	21342	9312	12937	16561	0.108	0.152	0.197	0.085	0.067	1226		1051
1992	15810	22918	30026	8019	11343	14667	0.111	0.154	0.198	0.087	0.068	1186		1080
1993	4109	8728	13347	8662	11734	14805	0.111	0.147	0.184	0.080	0.067	1256		1258
1994	24023	33595	43167	11448	14392	17337	0.104	0.132	0.160	0.065	0.067	1370		1509
1995	39062	49919	60776	15069	18140	21211	0.116	0.145	0.173	0.078	0.067	1835		1689
1996	439	3098	5757	16829	20106	23383	0.159	0.199	0.24	0.131	0.068	3022		1696
1997	45385	57563	69740	15914	19238	22562	0.148	0.186	0.22	0.119	0.067	2620		1605
1998	8077	17359	26640	14693	17959	21225	0.144	0.181	0.22	0.114	0.068	2390		1548
1999	43207	56539	69871	14129	17294	20458	0.155	0.196	0.24	0.128	0.068	2670		1548
2000	15205	24448	33691	14243	17344	20444	0.142	0.180	0.22	0.113	0.067	2407		1601
2001	15583	27663	39742	15126	18291	21456	0.143	0.181	0.22	0.113	0.068	2500		1685
2002	29093	43952	58812	15860	19104	22348	0.142	0.178	0.21	0.111	0.067	2622	17	1782
2003	31677	44557	57436	16936	20273	23611	0.166	0.21	0.25	0.141	0.068	3459	16	1863
2004	23632	34542	45451	17564	20983	24402	0.171	0.21	0.26	0.147	0.068	3731	59	1908
2005	15013	22954	30896	17970	21463	24956	0.193	0.24	0.30	0.177	0.068	4430	96	1900
2006	16792	24375	31958	17413	20960	24506	0.194	0.25	0.30	0.179	0.068	4377	53	1869
2007	18778	27594	36410	16965	20480	23996	0.183	0.23	0.28	0.164	0.068	4064	50	1866
2008	7808	14288	20769	17351	20777	24203	0.183	0.23	0.28	0.163	0.068	4107	8	1878
2009	8008	12667	17325	17764	21094	24425	0.177	0.22	0.27	0.155	0.067	3889	151	1852
2010	358	2540	4723	17664	20881	24098	0.21	0.26	0.31	0.192	0.068	4562	148	1751
2011	7043	10543	14042	16262	19302	22342	0.193	0.24	0.29	0.174	0.067	3858	22	1605

Year	Recruitment age 0			SSB			Total $F_{\text{ages 4-15}}$			F_{bar} commercial catch	F_{bar} recreational removals	Commercial landings	Commercial discards*	Recreational removals**
	Low	Value	High	Low	Value	High	Low	Value	High					
2012	2254	4553	6853	14974	17820	20666	0.21	0.26	0.32	0.197	0.067	3987	157	1440
2013	9896	15618	21340	13153	15851	18549	0.24	0.31	0.37	0.24	0.067	4137	53	1222
2014	21989	31873	41758	10498	13113	15728	0.189	0.25	0.31	0.182	0.066	2682	25	1008
2015	2353	6754	11155	8449	11021	13593	0.169	0.23	0.29	0.176	0.055	2066	40	690
2016	14033	23862	33692	6586	9113	11641	0.102	0.15	0.191	0.127	0.0189	1295	199	209
2017	1797	5109	8422	5837	8337	10838	0.083	0.121	0.160	0.103	0.0185	984	271	206
2018	6000	14280	22560	5833	8401	10969	0.073	0.107	0.142	0.095	0.0127	948	482	150
2019	3225	10007	16789	6569	9386	12202	0.070	0.102	0.135	0.082	0.021	972	464	284
2020	1392	8226	15059	7675	10947	14220	0.072	0.107	0.142	0.076	0.031	1042	325	468
2021		10875^		8417	12173	15928	0.070	0.106	0.141	0.075	0.031	1126	412	499
2022		10875^		8743	12924	17105	0.066	0.102	0.138	0.071	0.031	1126	196	509
2023		10875^		8656	13159	17661								

* Incomplete for some fleets 2002–2008.

** All values were derived from the 2012 survey estimate (1440 tonnes).

^ Geometric mean recruitment (2011–2020).

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