

Sole (*Solea solea*) in Division 7.e (western English Channel)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2025 should be no more than 1 151 tonnes.

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

Non-fisheries conservation considerations

Conservation aspects and associated management measures may exist at a national or regional level but were not reviewed by ICES.

Stock development over time

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

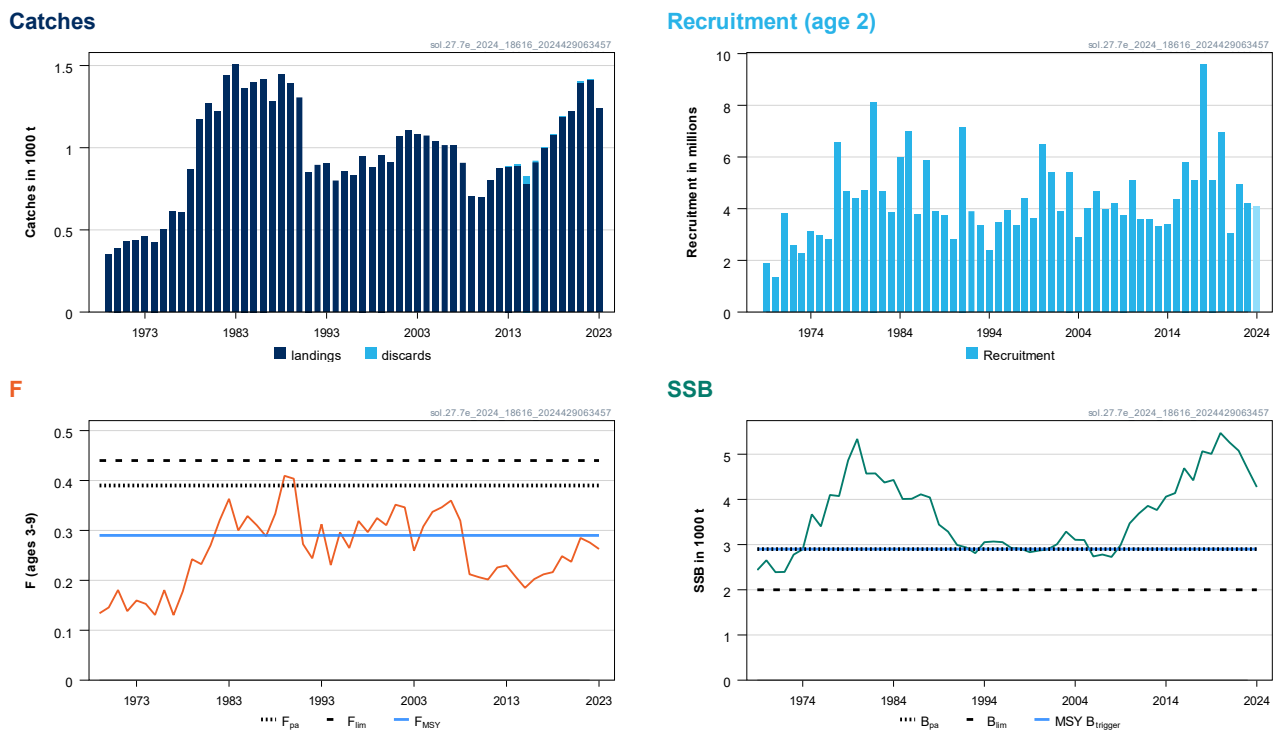


Figure 1 Sole in Division 7.e. Summary of the stock assessment. The assumed recruitment value for 2024 is shaded in a lighter colour. Discard estimates are only available since 2012.

Catch scenarios

Table 1 Sole in Division 7.e. Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
$F_{ages\ 3-9}$ (2024)	0.27	Based on landings of 1179 t for 2024. Selection pattern 2021–2023.
SSB (2025)	3984	Short-term forecast; in tonnes
$R_{age\ 2}$ (2024–2025)	4083	Geometric mean (1969–2023); in thousands
Catch (2024)	1184	TAC for 2024; in tonnes
Projected landings (2024)	1179	Short-term forecast assuming average landings rate for 2021–2023; in tonnes
Projected discards (2024)	5	Average discard ratio (0.45%) 2021–2023, not used in the assessment; in tonnes

Table 2 Sole in Division 7.e. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch* (2025)	Projected landings (2025)	Projected discards (2025)	F _{projected landings} (2025)	SSB (2026)	% SSB change **	% TAC change***	% advice change^
ICES advice basis								
MSY approach: F = F _{MSY}	1151	1146	5	0.29	3706	-7.0	-2.8	8.9
Other scenarios								
EU MAP^^: F _{MSY}	1151	1146	5	0.29	3706	-7.0	-2.8	8.9
EU MAP^^: F _{MSY lower}	674	671	3	0.160	4166	4.6	-43	-36
EU MAP^^: F _{MSY upper}	1319	1313	6	0.34	3544	-11.0	11.4	25
F = 0	0	0	0	0	4819	21	-100	-100
F = F _{pa}	1479	1473	7	0.39	3390	-14.9	25	40
F = F _{lim}	1632	1625	7	0.44	3243	-18.6	38	54
SSB ₂₀₂₆ = B _{lim}	2946	2933	13	1.01	2000	-50	149	179
Rollover TAC	1184	1179	5	0.30	3674	-7.8	0	12.0
SSB ₂₀₂₆ = B _{pa} = MSY B _{trigger}	1992	1983	9	0.57	2900	-27	68	88
SSB ₂₀₂₆ = SSB ₂₀₂₅	863	859	4	0.21	3984	0	-27	-18.4
F = F ₂₀₂₄	1092	1087	5	0.27	3762	-5.6	-7.8	3.3

* Total catch derived from the projected landings and the assumed discard rate.

** SSB 2026 relative to SSB 2025.

*** Total catch in 2025 relative to TAC 2024 (1 184 tonnes).

^ Advice value for 2025 relative to the advice value for 2024 (1 057 tonnes).

^^ EU multiannual plan (MAP) for the Western Waters (EU, 2019).

The increase in catch advice is caused by an upward revision of stock size and downward revision of F in comparison to last year's assessment.

Basis of the advice

Table 3 Sole in Division 7.e. The basis of the advice.

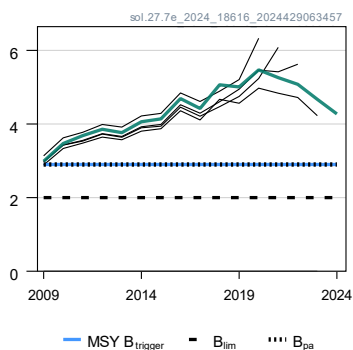
Advice basis	MSY approach
Management plan	ICES is aware of the multiannual management plan (MAP) that has been adopted by the EU for this stock (EU, 2019) and that ICES considers to be precautionary. There is no agreed shared management plan between the EU and the UK for this stock, and ICES provides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

Quality of the assessment

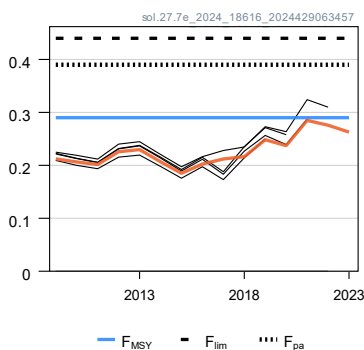
Survey coverage was incomplete in the 2022 UK-Q1SWBeam survey and the survey index for that year is not used in the assessment.

The current assessment shows an upward revision in SSB and reduction in F in comparison to last year's assessment.

SSB (1000 t)



F (ages 3-9)



Rec (age 2; Millions)

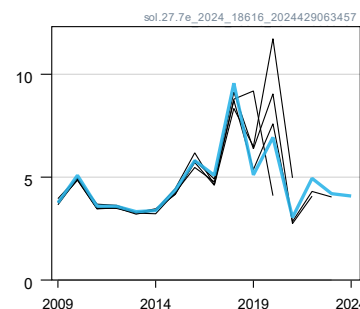


Figure 2 Sole in Division 7.e. Historical assessment results (final-year SSB estimate and recruitment assumption included).

Issues relevant for the advice

There is no information to present for this stock.

Reference points

Table 4 Sole in Division 7.e. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	2900	B_{pa} ; tonnes	ICES (2017)
	F_{MSY}	0.29	Median point estimate of EqSim simulations	ICES (2017)
Precautionary approach	B_{lim}	2000	Rounded $B_{pa}/1.4$; tonnes	ICES (2017)
	B_{pa}	2900	Rounded B_{loss} (SSB in 1999). Lowest SSB with high recruitment; tonnes.	ICES (2017)
	F_{lim}	0.44	Segmented regression simulation of stock-recruitment, with B_{lim} as the breakpoint and no error	ICES (2017)
	F_{pa}	0.39	F_{p05} ; the F that leads to $SSB \geq B_{lim}$ with 95% probability	ICES (2017, 2021)
Management plan	MAP MSY $B_{trigger}$	2900	MSY $B_{trigger}$; tonnes	EU (2019), ICES (2017)
	MAP B_{pa}	2900	B_{pa} ; tonnes	EU (2019), ICES (2017)
	MAP B_{lim}	2000	B_{lim} ; tonnes	EU (2019), ICES (2017)
	MAP F_{MSY}	0.29	F_{MSY}	EU (2019), ICES (2017)
	MAP range $F_{MSY lower}$	0.16	Minimum F which produces at least 95% of maximum yield	EU (2019), ICES (2017)
	MAP range $F_{MSY upper}$	0.34	Maximum F which produces at least 95% of maximum yield	EU (2019), ICES (2017)

Basis of the assessment

Table 5 Sole in Division 7.e. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023)
Assessment type	Age-based analytical assessment* (FLXSA; ICES, 2024).
Input data	Commercial landings-at-age data; two survey indices: UK-FSP [B4381] and UK-Q1SWBeam ([B2732]; 2022 not included in the assessment) and two commercial tuning fleets (UK-CBT-late and UK-COT); natural mortality is assumed constant over ages and years at 0.1; fixed maturity ogive from divisions 7.f and 7.g
Discards and bycatch	Not included in the assessment but used to provide catch advice
Indicators	None
Other information	Last inter-benchmark in 2015 (IBPWCFlat2; ICES, 2015)
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

* [View assessment in Transparent Assessment Framework \(TAF\)](#)

History of the advice, catch, and management

Table 6 Sole in Division 7.e. ICES advice, the agreed TAC, official landings, and ICES estimates for landings and discards. Weights are in tonnes.

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC	Official landings	ICES landings	ICES discards
1987	No increase in F		1150	1150	1110	1280	
1988	No decrease in SSB; TAC		1300	1300	950	1444	
1989	No decrease in SSB; TAC		1000	1000	800	1390	
1990	SSB = 3000 tonnes; TAC		900	900	750	1315	
1991	TAC		540	800	840	852	
1992	70% of F_{1990}		770	800	770	895	
1993	35% reduction in F		700	900	790	904	
1994	No increase in F		1000	1000	840	800	
1995	No increase in F		860	950	880	856	
1996	$F_{1996} < F_{1994}$		680	700	740	833	
1997	No increase in F		690	750	860	950	
1998	No increase in F		670	670	770	880	
1999	Reduce F below F_{pa}		670	700	660	956	
2000	Reduce F below F_{pa}		< 640	660	660	912	
2001	Reduce F below F_{pa}		< 580	600	650	1069	
2002	Reduce F below F_{pa}		< 450	525	540	1105	
2003	Rebuilding plan or $F = 0$		-	394	620	1078	
2004	$F = 0$ or recovery plan 1		0	300	490	1074	
2005	80% reduction in F or recovery plan		< 230	865	960	1037	
2006	80% reduction in F or recovery plan		< 240	940	964	1016	
2007	68% reduction in F or recovery plan		< 350	900	953	1015	
2008	75% reduction in F		< 260	765	815	908	
2009	70% reduction in F		< 320	650	785	700	
2010	Reduce fishing effort and catches		-	618	761	698	
2011	MSY framework		< 660	710	877	801	
2012	MSY framework		< 740	777	871	872	2
2013	MSY framework		< 960	894	889	882	1
2014	MSY approach		< 832	832	886	885	10
2015	MSY approach		< 851	851	777	774	54
2016	MSY approach		≤ 1226	979	915	911	10
2017	MSY approach	≤ 1198		1178	1000	998	4
2018	MSY approach	≤ 1239		1202	1086	1074	3
2019	MSY approach	≤ 1272		1242	1182	1184	4

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC	Official landings	ICES landings	ICES discards
2020	Management plan	1478 (range 878–1685)		1478	1218	1219	< 1
2021	Management plan	1925 (range 1141–2197)		1925	1395	1391	13
2022	MSY approach	≤ 1810		1810	1407*	1409	3
2023	MSY approach	≤ 1394		1394	1238*	1239	2
2024	MSY approach	≤ 1057		1184			
2025	MSY approach	≤ 1151					

* Preliminary official landings.

History of the catch and landings

Table 7 Sole in Division 7.e. Catch distribution by fleet in 2023 as estimated by ICES.

Catch	Landings				Discards			
	Beam trawl	Otter trawl	Gillnets	Other gears	Beam trawl	Otter trawl	Gillnets	Other gears
1241 tonnes	68%	16.7%	8.7%	6.7%	94%	0%	6.4%	0%
	1239 Tonnes				2 tonnes			

Table 8 Sole in Division 7.e. History of commercial landings by country and ICES estimates of landings and discards. Weights are in tonnes.

Year	Belgium	France	Netherlands	Ireland	UK and Channel Islands	Official total	ICES landings	ICES discards
1974	-	323	-	-	-	323	427	
1975	3	271	-	-	217	491	491	
1976	4	352	-	-	260	616	616	
1977	3	331	-	-	272	606	606	
1978	4	384	-	-	453	841	861	
1979	1	515	-	-	665	1181	1181	
1980	45	447	-	13	764	1269	1269	
1981	16	415	1	-	788	1220	1215	
1982	98	321	-	-	1028	1447	1446	
1983	47	405	3	-	1043	1498	1498	
1984	48	421	-	-	901	1370	1370	
1985	58	130	-	-	911	1099	1409	
1986	62	467	-	-	840	1369	1419	
1987	48	432	-	-	632	1112	1280	
1988	67	98	-	-	784	949	1444	
1989	69	112	6	-	613	800	1390	
1990	41	81	-	-	636	758	1315	
1991	35	325	-	-	477	837	852	
1992	41	267	-	-	468	776	895	
1993	59	236	-	-	498	793	904	
1994	33	257	-	-	546	836	800	
1995	21	294	-	-	565	880	856	
1996	8	297	-	-	428	733	833	
1997	13	348	-	1	496	858	950	
1998	40	343	-	-	389	772	880	
1999	13	-	-	-	396	409	956	
2000	4	241	-	-	413	658	912	
2001	19	224	-	-	407	650	1069	
2002	33	198	-	-	309	540	1105	
2003	1	363	-	1	255	620	1078	
2004	7	302	-	-	185	494	1074	
2005	26	406	-	-	527	959	1037	
2006	32	357	-	-	575	964	1016	

Year	Belgium	France	Netherlands	Ireland	UK and Channel Islands	Official total	ICES landings	ICES discards
2007	34	384	-	-	536	953	1015	
2008	28	312	-	< 1	474	815	908	
2009	17	386	-	-	382	785	700	
2010	17	375	-	-	369	761	698	
2011	22	424	-	-	431	877	801	
2012	39	325	-	< 1	506	871	872	2
2013	30	319	-	-	540	889	882	1
2014	25	351	-	< 1	510	886	885	10
2015	42	245	-	< 1	490	777	774	54
2016	46	245	-	-	624	915	911	10
2017	56	198	-	< 1	746	1000	998	4
2018	68	217	< 1	< 1	801	1086	1074	3
2019	47	208	< 1	< 1	926	1182	1184	4
2020	58	194	< 1	-	969	1222	1219	< 1
2021	104	252	< 1	< 1	1048	1403	1391	13
2022*	132	231	-	<1	1044	1407	1409	3
2023*	104	193	< 1	< 1	941	1238	1239	2

* Preliminary official landings.

Summary of the assessment

Table 9 Sole in Division 7.e. Assessment summary. Weights are in tonnes, numbers in thousands.

Year	Recruitment (age 2)	Stock size SSB	Landings	Discards**	Fishing mortality (ages 3–9)
1969	1874	2437	353		0.134
1970	1343	2652	390		0.146
1971	3826	2390	432		0.181
1972	2568	2395	437		0.138
1973	2264	2778	458		0.160
1974	3107	2896	427		0.153
1975	2967	3670	501		0.131
1976	2791	3403	614		0.180
1977	6556	4098	605		0.130
1978	4657	4074	868		0.178
1979	4389	4865	1170		0.24
1980	4702	5338	1268		0.23
1981	8130	4572	1218		0.27
1982	4679	4575	1438		0.32
1983	3866	4374	1504		0.36
1984	5968	4430	1363		0.30
1985	6982	4009	1400		0.33
1986	3765	4013	1418		0.31
1987	5848	4112	1279		0.29
1988	3878	4043	1443		0.33
1989	3735	3442	1389		0.41
1990	2818	3287	1306		0.40
1991	7161	2991	852		0.27
1992	3902	2937	896		0.24
1993	3350	2810	904		0.31
1994	2378	3053	800		0.23
1995	3452	3068	856		0.30
1996	3939	3054	833		0.26
1997	3333	2921	950		0.32
1998	4400	2910	880		0.30
1999	3607	2832	956		0.32
2000	6486	2868	912		0.31

Year	Recruitment (age 2)	Stock size SSB	Landings	Discards**	Fishing mortality (ages 3–9)
2001	5400	2896	1069		0.35
2002	3875	3008	1105		0.35
2003	5421	3287	1078		0.26
2004	2876	3106	1074		0.31
2005	4017	3101	1037		0.34
2006	4658	2738	1016		0.35
2007	3984	2780	1015		0.36
2008	4186	2727	908		0.32
2009	3754	2988	700		0.21
2010	5087	3470	698		0.21
2011	3589	3685	801		0.20
2012	3583	3857	872	2	0.23
2013	3324	3765	882	1	0.23
2014	3376	4061	885	10	0.21
2015	4371	4139	774	54	0.185
2016	5805	4690	911	10	0.20
2017	5089	4422	998	4	0.21
2018	9564	5065	1074	4	0.22
2019	5110	5007	1184	4	0.25
2020	6932	5470	1219	0	0.24
2021	3039	5260	1391	13	0.28
2022	4941	5078	1409	3	0.28
2023	4197	4670	1239	2	0.26
2024	4083*	4274			

* Geometric mean (1969–2023).

** Discards are not included in the assessment.

Sources and references

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[Download the stock assessment data and figures](#)

Recommended citation: ICES. 2024. Sole (*Solea solea*) in Division 7.e (western English Channel). In Report of the ICES Advisory Committee, 2024. ICES Advice 2024, sol.27.7e. <https://doi.org/10.17895/ices.advice.25019678>