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

ICES advice on fishing opportunities

ICES advises that when the maximum sustainable yield (MSY) approach is applied, catches in 2027 should be no more than 1 017 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}.

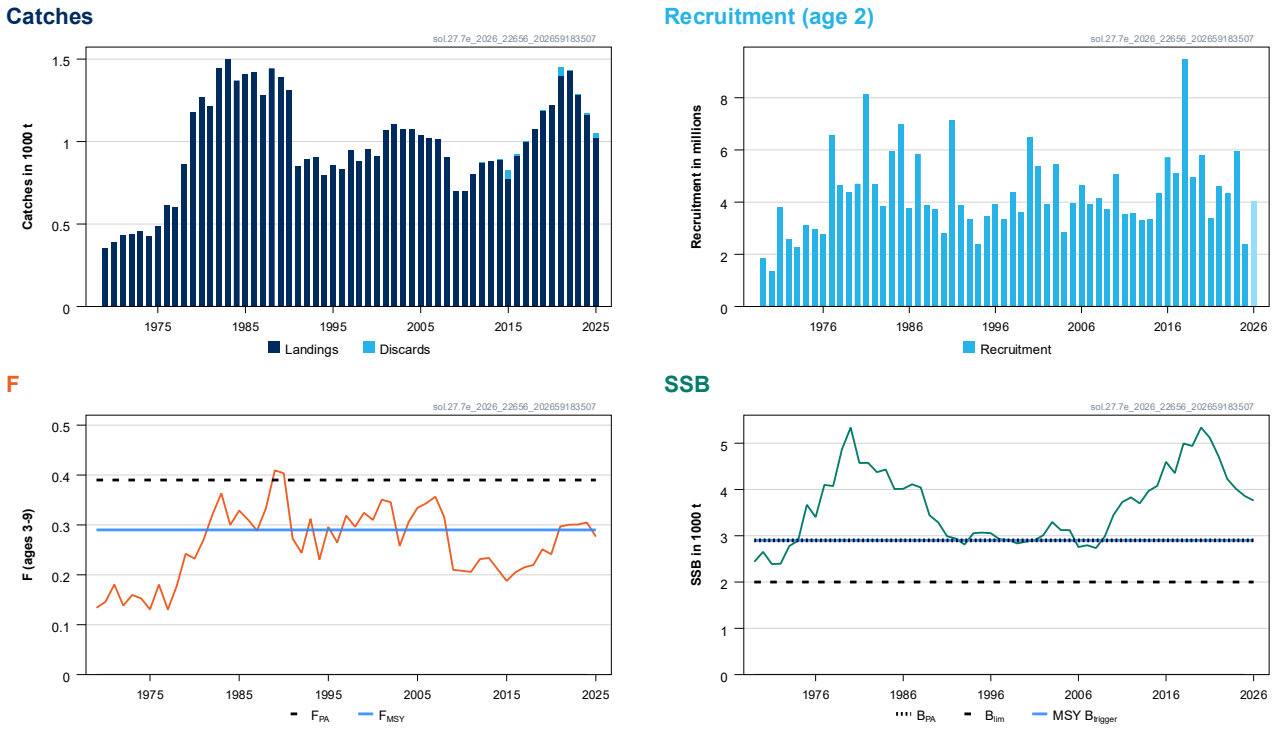

Figure 1 Sole in Division 7.e. Summary of the stock assessment. The assumed recruitment value for 2026 is shaded in a lighter colour. Discard estimates are available since 2012.

Catch scenarios

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

Variable	Value	Notes
$F_{ages\ 3–9}$ (2026)	0.29	Average exploitation pattern (2023–2025), scaled to average $F_{ages\ 3–9}$ in 2023–2025
Spawning-stock biomass (SSB; 2027)	3452	Short-term forecast; in tonnes
$R_{age\ 2}$ (2026, 2027)	4058	Geometric mean (1969–2025); in thousands
Catch (2026)	1096	Total catch; in tonnes
Projected landings (2026)	1081	Short-term forecast; in tonnes
Projected discards (2026)	15	Average discard rate (1.38%) 2023–2025; in tonnes

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

Basis	Total catch* (2027)	Projected landings (2027)	Projected discards (2027)	$F_{projected\ landings}$ (2027)	Spawning-stock biomass (SSB; 2028)	% SSB change **	% advice change***
ICES advice basis							
Maximum sustainable yield (MSY) approach: $F = F_{MSY}$	1017	1003	14	0.294	3313	-4.0	-16.2
Other scenarios							
EU MAP^: F_{MSY}	1017	1003	14	0.294	3313	-4.0	-16.2
EU MAP^: $F_{MSY\ lower}$	596	588	8	0.160	3709	7.5	-51
EU MAP^: $F_{MSY\ upper}$	1165	1149	16	0.34	3173	-8.1	-3.9
$F = 0$	0	0	0	0	4275	24	-100
$F = F_{PA}$	1307	1289	18	0.39	3041	-11.9	7.7
$SSB_{2028} = B_{lim}$	2434	2400	34	0.90	2000	-42	101
Rollover total allowable catch (TAC)	1213	1196	17	0.36	3129	-9.4	0
$SSB_{2028} = B_{PA} = MSY\ B_{trigger}$	1457	1437	20	0.45	2900	-16.0	20
$SSB_{2028} = SSB_{2027}$	869	857	12	0.24	3452	0	-28
$F = F_{2026}$	1029	1015	14	0.29	3301	-4.4	-15.2

* Total catch derived from the projected landings and the assumed discard rate.
** SSB 2028 relative to SSB 2027.
*** Advice value for 2027 relative to the advice value for 2026 (1213 tonnes). The 2026 TAC is the same as the advice value.
^ EU multiannual plan (MAP) for the Western Waters (EU, 2019).
^^ Calculation of the probability of the stock being below B_{lim} in 2028 is not possible with this deterministic forecast.

The decrease in catch advice is because of a decline in the stock and a downwards rescaling of the stock size.

Basis of the advice

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

Advice basis	Maximum sustainable yield (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

The assessment is based on landings only. However, discards continue to be relatively low (1.38%, average 2023–2025) and are used to derive the total catch advice.

This year's assessment has resulted in a downscaling of recent stock size and upscaling of F.

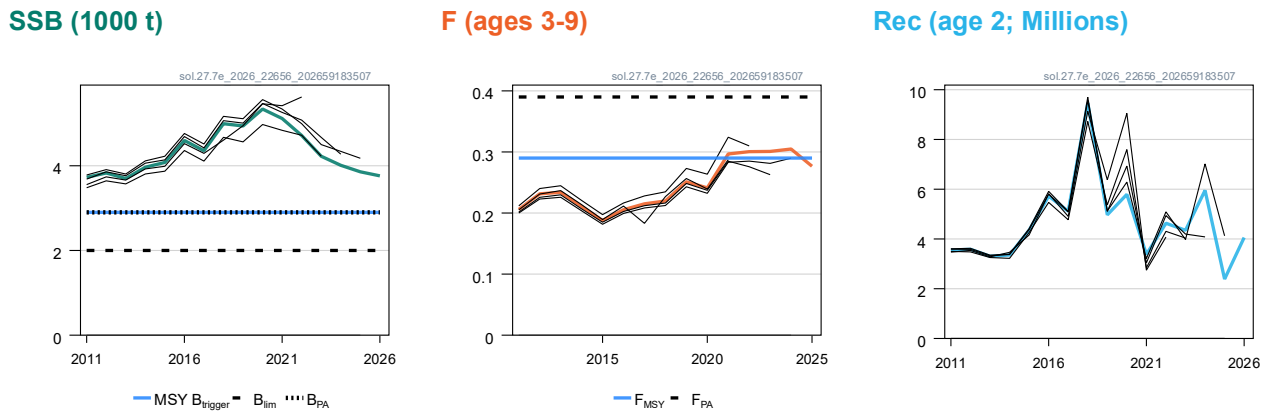

Figure 2 Sole in Division 7.e. Historical assessment results (final-year spawning-stock biomass [SSB] estimate and recruitment assumption included for each line).

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
Maximum sustainable yield (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 spawning-stock biomass (SSB) with high recruitment; tonnes.	ICES (2017)
	F_{PA}	0.39	F_{P05}; the F that leads to SSB ≥ 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, 2025)
Assessment type	Age-based analytical model (FLXSA) used for the assessment and FLR for the forecast (ICES, 2026)*
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. Weights-at-age derived from international catch samples, smoothed with a quadratic fit.
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 total allowable catch (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 spawning-stock biomass (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	410	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	Maximum sustainable yield (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	5

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC	Official landings	ICES landings	ICES discards
2018	MSY approach	≤ 1239		1202	1086	1074	4
2019	MSY approach	≤ 1272		1242	1182	1184	4
2020	Management plan	1478 (range 878–1685)		1478	1222	1219	< 1
2021	Management plan	1925 (range 1141–2197)		1925	1403	1400	50
2022	MSY approach	≤ 1810		1810	1416	1426	8
2023	MSY approach	≤ 1394		1394	1287	1283	6
2024	MSY approach	≤ 1057		1184	1163*	1163	10
2025	MSY approach	≤ 1151		1151	1023*	1023	29
2026	MSY approach	≤ 1213		1213			
2027	MSY approach	≤ 1017					

* Preliminary landings.

History of the catch and landings

Table 7 Sole in Division 7.e. Catch distribution by fleet in 2025 as estimated by ICES.*

Catch	Landings				Discards			
1 053 tonnes	Beam trawl 68%	Otter trawl 18%	Gillnets 9%	Other gears 5%	Beam trawl 56%	Otter trawl 44%	Gillnets 0%	Other gears 0%
	1 023 tonnes				29 tonnes			

* 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.

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	949	
1998	40	343	-	-	389	772	880	
1999	13	-	-	-	396	409	957	

Year	Belgium	France	Netherlands	Ireland	UK and Channel Islands	Official total	ICES landings	ICES discards
2000	4	241	-	-	413	658	914	
2001	19	224	-	-	407	650	1069	
2002	33	198	-	-	309	540	1106	
2003	1	363	-	1	255	620	1078	
2004	7	302	-	-	185	494	1075	
2005	26	406	-	-	527	959	1039	
2006	32	357	-	-	575	964	1023	
2007	34	384	-	-	536	953	1015	
2008	28	312	-	< 1	474	815	908	
2009	17	386	-	-	382	785	701	
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	883	1
2014	25	351	-	< 1	510	886	885	10
2015	42	245	-	< 1	490	777	774	54
2016	46	245	-	-	624	915	913	10
2017	56	198	-	< 1	746	1000	998	5
2018	68	217	< 1	< 1	801	1086	1075	4
2019	47	208	< 1	< 1	926	1182	1185	4
2020	58	194	< 1	-	969	1222	1219	< 1
2021	104	252	< 1	< 1	1048	1403	1400	50
2022	131	239	-	< 1	1046	1416	1426	8
2023	102	198	-	< 1	988	1287	1283	6
2024*	56	210	-	-	897	1163	1163	10
2025*	60	202	< 1	< 1	760	1023	1023	29

* Preliminary 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	391		0.146
1971	3826	2390	432		0.181
1972	2568	2395	437		0.138
1973	2264	2778	459		0.160
1974	3107	2896	427		0.153
1975	2967	3670	491		0.131
1976	2791	3403	616		0.180
1977	6556	4098	606		0.130
1978	4657	4074	861		0.178
1979	4389	4865	1181		0.24
1980	4702	5338	1269		0.23
1981	8130	4572	1215		0.27
1982	4680	4575	1446		0.32
1983	3866	4374	1498		0.36
1984	5968	4430	1370		0.30
1985	6982	4009	1409		0.33
1986	3765	4013	1419		0.31
1987	5848	4112	1280		0.29
1988	3878	4043	1444		0.33
1989	3736	3442	1390		0.41
1990	2818	3287	1315		0.40
1991	7162	2991	852		0.27

Year	Recruitment (age 2)	Stock size SSB	Landings	Discards**	Fishing mortality (ages 3–9)
1992	3903	2938	895		0.24
1993	3351	2811	904		0.31
1994	2379	3054	800		0.23
1995	3454	3069	856		0.30
1996	3940	3055	833		0.26
1997	3336	2922	949		0.32
1998	4404	2912	880		0.30
1999	3615	2834	957		0.32
2000	6486	2872	914		0.31
2001	5391	2901	1069		0.35
2002	3939	3014	1106		0.35
2003	5442	3297	1078		0.26
2004	2866	3123	1075		0.31
2005	3978	3121	1039		0.33
2006	4646	2757	1023		0.34
2007	3946	2795	1015		0.36
2008	4153	2735	908		0.32
2009	3727	2981	701		0.21
2010	5058	3447	698		0.21
2011	3555	3727	801		0.21
2012	3585	3830	872	2	0.23
2013	3304	3699	883	1	0.23
2014	3356	3966	885	10	0.21
2015	4354	4079	774	54	0.188
2016	5722	4597	913	10	0.21
2017	5116	4354	998	5	0.22
2018	9468	4993	1075	4	0.22
2019	4970	4940	1185	4	0.25
2020	5793	5339	1219	< 1	0.24
2021	3382	5116	1400	50	0.30
2022	4633	4715	1426	8	0.30
2023	4349	4225	1283	6	0.30
2024	5954	4011	1163	10	0.30
2025	2388	3857	1023	29	0.28
2026	4058*	3762			

* Geometric mean (1969–2025).
** Discards are not included in the assessment.

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Recommended citation: ICES. 2026. Sole (*Solea solea*) in Division 7.e (western English Channel). *In* Report of the ICES Advisory Committee, 2026. ICES Advice 2026, sol.27.7e. https://doi.org/10.17895/ices.advice.30932414