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

ICES advice on fishing opportunities

ICES advises that when the EU multiannual plan (MAP) for Western Waters and adjacent waters is applied, catches in 2021 that correspond to the F ranges in the plan are between 1141 tonnes and 2197 tonnes. According to the MAP, catches higher than those corresponding to F_{MSY} (1925 tonnes) can only be taken under conditions specified in the MAP, whilst the entire range is considered precautionary when applying the ICES advice rule.

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

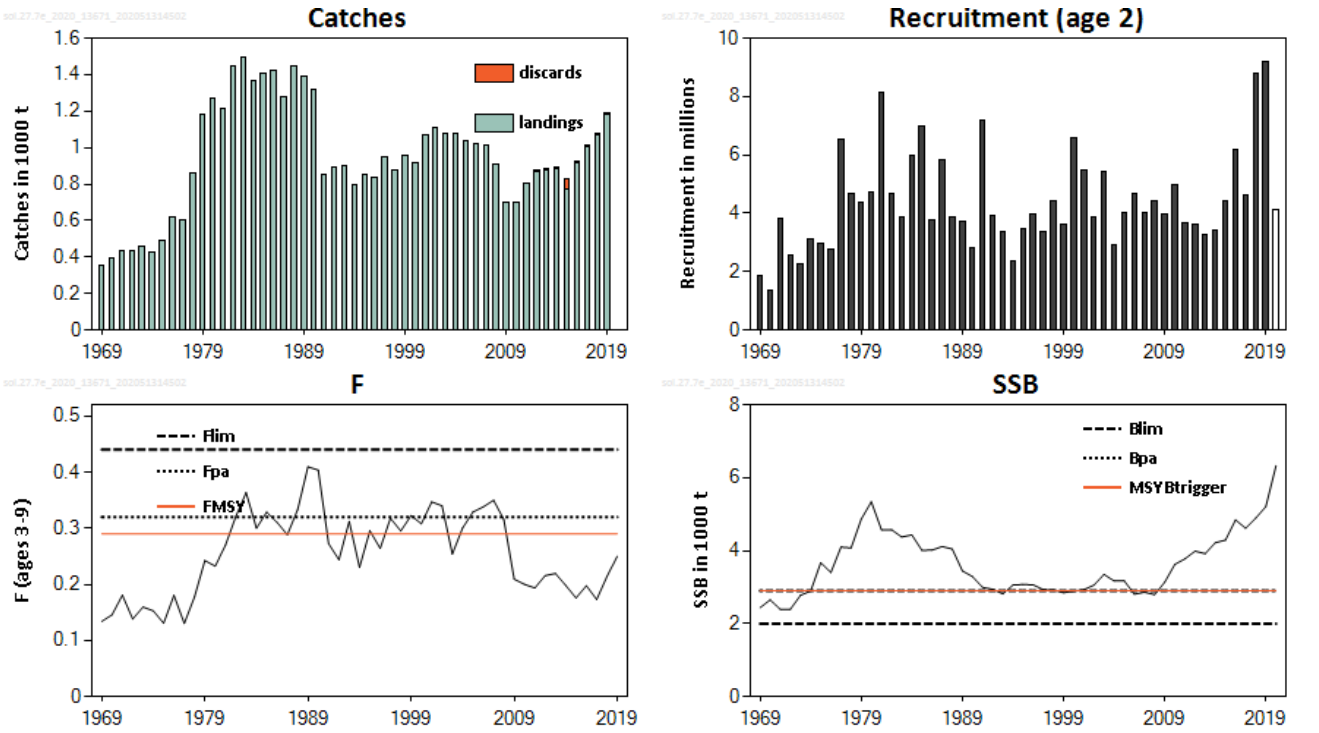

Figure 1 Sole in Division 7.e. Summary of the stock assessment (weights are in thousand tonnes). ICES estimated catches, recruitment (R), fishing mortality (F), and spawning-stock biomass (SSB). The assumed recruitment value is not shaded. Discard estimates are only available from 2012 onwards.

Stock and exploitation status

Table 1 Sole in Division 7.e. State of the stock and the fishery relative to reference points.

		Fishing pressure				Stock size			
		2017	2018	2019		2018	2019	2020	
Maximum sustainable yield	F_{MSY}	✓	✓	✓	Below	MSY $B_{trigger}$	✓	✓	✓ Above trigger
Precautionary approach	F_{pa},F_{lim}	✓	✓	✓	Harvested sustainably	B_{pa},B_{lim}	✓	✓	✓ Full reproductive capacity
Management plan	F_{MGT}	✓	✓	✓	Within the range	B_{MGT}	✓	✓	✓ Above trigger

Catch scenarios

Table 2 Sole in Division 7.e. Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
$F_{ages\ 3–9}$ (2020)	0.20	Average F (2017–2019) scaled to F corresponding to landings constraint.
SSB_{2021}	6589	Fishing at F = 0.20; in tonnes.
$R_{age\ 2}$ (2020–2021)	4101	Geometric mean (1969–2019); in thousands.
Catch (2020)	1478	TAC 2020; in tonnes.
Projected landings (2020)	1472	TAC 2020 – projected discards; in tonnes.
Projected discards (2020)	6	Average rate of 2017–2019 (0.39%); in tonnes. Not used in the assessment.

Table 3 Sole in Division 7.e. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch * (2021)	Projected landings (2021)	Projected discards (2021)	$F_{projected\ landings}$ (2021)	SSB (2022)	% SSB change **	% TAC change ^	% advice change ^^
ICES advice basis								
EU MAP ^^^: F_{MSY}	1925	1918	7	0.29	5895	−10.5	30	30
F = MAP $F_{MSY\ lower}$	1141	1137	4	0.160	6663	1.13	−23	30 #
F = MAP $F_{MSY\ upper}$	2197	2189	9	0.34	5630	−14.6	49	30 #
Other scenarios								
F = 0	0	0	0	0	7785	18.2	−100	−100
F_{pa}	2090	2082	8	0.32	5734	−13.0	41	41
F_{lim}	2699	2688	10	0.44	5141	−22	83	83
$SSB_{2022} = B_{lim}$	5976	5953	23	1.62	2000	−70	304	304
Rollover TAC	1478	1472	6	0.21	6333	−4	0	0
$SSB_{2022} = B_{pa} = MSY\ B_{trigger}$	5022	5002	19	1.12	2900	−56	240	240
$F = F_{2020}$	1414	1408	5	0.20	6006	−2.9	−4.3	−4.3

* Total catch derived from the projected landings and the assumed discard rate.
** SSB 2022 relative to SSB 2021.
^ Total catch in 2021 relative to TAC in 2020 (1478 tonnes).
^^ Advice value for 2021 relative to the advice value for 2020 (1478 tonnes).
^^^ EU multiannual plan (MAP) for the Western Waters (EU, 2019).
# Advice value this year relative to the advice value last year for the MAP $F_{MSY\ lower}$ (878 tonnes) and MAP $F_{MSY\ upper}$ (1685 tonnes).

This year's advice has increased compared to last year's advice because of an upward revision in recent recruitment, leading to an increase in SSB.

Quality of the assessment

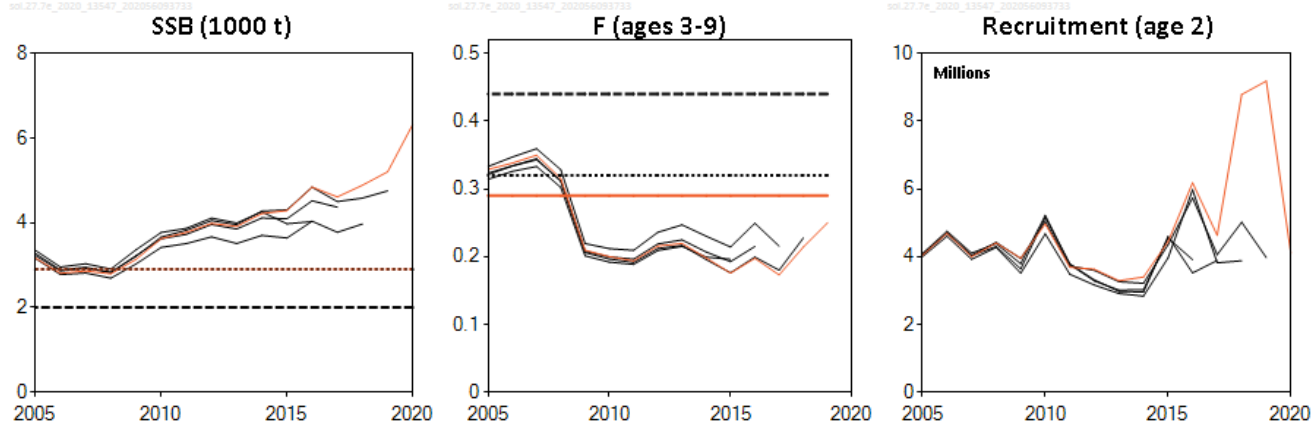

Figure 2 Sole in Division 7.e. Historical assessment results (final-year recruitment assumptions included).

History of the advice, catch, and management

Table 4 Sole in Division 7.e. History of ICES advice, agreed TAC, official landings, and ICES estimates for landings and discards. All 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	949	
1998	No increase in F		670	670	770	880	
1999	Reduce F below F_{pa}		670	700	660	957	
2000	Reduce F below F_{pa}		< 640	660	660	914	
2001	Reduce F below F_{pa}		< 580	600	650	1069	
2002	Reduce F below F_{pa}		< 450	525	540	1106	
2003	Rebuilding plan or F = 0		-	394	620	1078	
2004	F = 0 or recovery plan 1		0	300	490	1075	
2005	80% reduction in F or recovery plan		< 230	865	960	1039	
2006	80% reduction in F or recovery plan		< 240	940	961	1022	
2007	68% reduction in F or recovery plan		< 350	900	954	1015	
2008	75% reduction in F		< 260	765	812	908	
2009	70% reduction in F		< 320	650	784	701	
2010	Reduce fishing effort and catches		-	618	761	698	
2011	MSY framework		< 660	710	876	801	
2012	MSY framework		< 740	777	870	872	2
2013	MSY framework		< 960	894	889	883	1
2014	MSY approach		< 832	832	886	885	10
2015	MSY approach		< 851	851	777	774	54
2016	MSY approach		≤ 1226	979	914	913	10
2017	MSY approach	≤ 1198		1178	1000	1007	4
2018	MSY approach	≤ 1239		1202	1074 *	1075	3
2019	MSY approach	≤ 1272		1242	1176 *	1185	4
2020	Management plan	1478 (range 878–1685)		1478			
2021	Management plan	1925 (range 1141–2197)					

* Preliminary.

Summary of the assessment

Table 5 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	4703	5338	1269		0.23
1981	8131	4572	1215		0.27
1982	4680	4575	1446		0.32
1983	3866	4374	1498		0.36
1984	5968	4430	1370		0.30
1985	6983	4009	1409		0.33
1986	3766	4014	1419		0.31
1987	5849	4112	1280		0.29
1988	3879	4044	1444		0.33
1989	3737	3444	1390		0.41
1990	2819	3288	1315		0.40
1991	7168	2993	852		0.27
1992	3906	2940	895		0.24
1993	3353	2814	904		0.31
1994	2382	3058	800		0.23
1995	3462	3074	856		0.30
1996	3950	3062	833		0.26
1997	3350	2931	949		0.32
1998	4424	2923	880		0.30
1999	3612	2848	957		0.32
2000	6595	2891	914		0.31
2001	5471	2929	1069		0.35
2002	3853	3056	1106		0.34
2003	5431	3350	1078		0.25
2004	2896	3169	1075		0.30
2005	4045	3173	1039		0.33
2006	4689	2808	1023		0.34
2007	4001	2863	1015		0.35
2008	4403	2795	908		0.32
2009	3957	3136	701		0.21
2010	4966	3624	698		0.20
2011	3687	3775	801		0.194
2012	3630	3987	872	2	0.22

Year	Recruitment (age 2)	Stock size SSB	Landings	Discards **	Fishing mortality (ages 3–9)
2013	3292	3916	883	1	0.22
2014	3398	4219	885	10	0.198
2015	4441	4289	774	54	0.176
2016	6182	4844	913	10	0.197
2017	4631	4612	1007	4	0.173
2018	8791	4891	1075	4	0.21
2019	9188	5207	1185	4	0.25
2020	4101 *	6329			

* Geometric mean (1969–2019).
** Discards are not included in the assessment.

Sources and references

EU. 2019. Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008. Official Journal of the European Union, L 83: 1–17. http://data.europa.eu/eli/reg/2019/472/oj.

ICES. 2020. Working Group for the Celtic Seas Ecoregion (WGCSE). Draft report. ICES Scientific Reports. 2:40. Xx pp. http://doi.org/10.17895/ices.pub.5978. Publication of the full report is expected end of 2020.

Recommended citation: ICES. 2020. Sole (*Solea solea*) in Division 7.e (western English Channel). *In* Report of the ICES Advisory Committee, 2020. ICES Advice 2020, sol.27.7e. https://doi.org/10.17895/ices.advice.5852.

Annex 1

ICES Advice on fishing opportunities, catch, and effort
Celtic Seas Ecoregion, Greater North Sea ecoregion
Published 28 June 2019

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

ICES advice on fishing opportunities

ICES advises that when the EU multiannual plan (MAP) for the Western Waters and adjacent waters is applied, catches in 2020 that correspond to the F ranges in the MAP are between 878 and 1685 tonnes. According to the MAP, catches higher than those corresponding to F_{MSY} (1478 tonnes) can only be taken under conditions specified in the MAP, whilst the entire range is considered precautionary when applying the ICES advice rule.

Stock development over time

Spawning–stock biomass (SSB) has increased since 2008 and is well above MSY $B_{trigger}$. Fishing mortality (F) has been below F_{MSY} since 2009. Recruitment (R) has been variable without a trend and is currently around the long-term geometric mean.

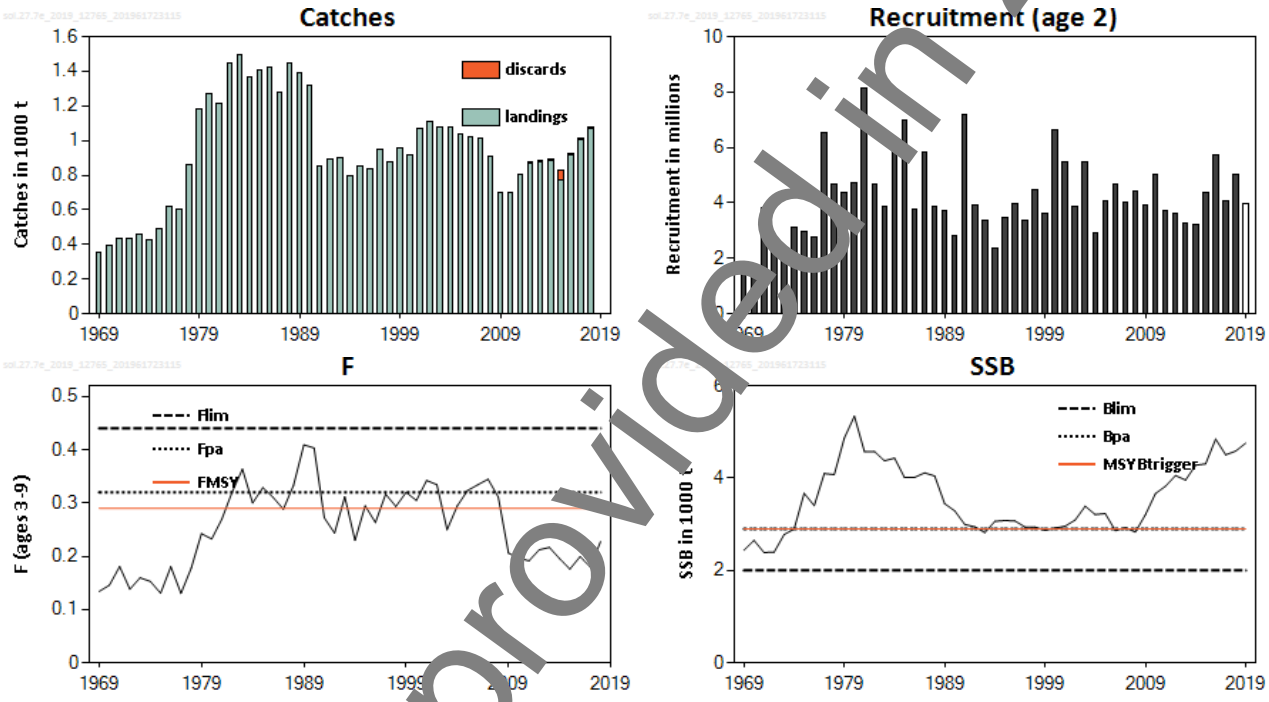

Figure 1 Sole in Division 7.e. Summary of the stock assessment. ICES estimated catches, recruitment, fishing mortality, and spawning–stock biomass. Assumed recruitment values are not shaded. Discard estimates are only available from 2012 onwards.

Stock and exploitation status

ICES assesses that fishing pressure on the stock is below F_{MSY}, F_{pa}, and F_{lim}, and that the spawning–stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}.

Table 1 Sole in Division 7.e. State of the stock and fishery relative to reference points.

		Fishing pressure					Stock size			
		2016	2017	2018			2017	2018	2019	
Maximum sustainable yield	F_{MSY}	✓	✓	✓	Below	MSY $B_{trigger}$	✓	✓	✓	Above trigger
Precautionary approach	F_{pa},F_{lim}	✓	✓	✓	Harvested sustainably	B_{pa},B_{lim}	✓	✓	✓	Full reproductive capacity
Management plan	F_{MGT}	✓	✓	✓	Within the range	B_{MGT}	✓	✓	✓	Above trigger

Catch scenarios

Table 2 Sole in Division 7.e. Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
F ages 3–9 (2019)	0.23	F_{sq} = $F_{Average}$(2016–2018) rescaled to F_{2018}
SSB_{2020}	4 731	Tonnes; Fishing at F_{sq}
R age 2 (2019–2020)	3 973	Thousands; GM (1969–2017)
Catch (2019)	1 224	Tonnes; Wanted plus unwanted catch
Wanted catch (2019)	1 216	Tonnes; Fishing at F_{sq}
Unwanted catch (2019)	7	Tonnes; Average ratio of 2016–2018 (0.61%)

Table 3 Sole in Division 7.e. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch * (2020)	Wanted catch ** (2020)	Unwanted catch ** (2020)	Wanted F (2020)	SSB (2021)	% SSB change ***	% TAC change ^	% Advice change ^^
ICES advice basis								
EU MAP ^^^: F_{MSY}	1478	1469	9	0.29	4334	−8.4	19.0	16.2
F = MAP $F_{MSY\ lower}$	878	873	5	0.160	4915	3.9	−29	−31
F = MAP $F_{MSY\ upper}$	1685	1675	10	0.34	4134	−12.6	36	32
Other scenarios								
F = 0	0	0	0	0	5772	22	−100	−100
F_{pa}	1603	1594	10	0.32	4213	−11.0	29	26
F_{lim}	2065	2052	13	0.44	3767	−20	66	62
$SSB_{2021} = B_{lim}$	3930	3906	24	1.20	2000	−58	216	209
$SSB_{2021} = B_{pa}$= MSY $B_{trigger}$	2972	2954	18	0.74	2900	−39	139	134
$F = F_{2019}$	1201	1194	7	0.23	4602	−2.7	−3.3	−5.6

* Total catch derived from the wanted catch and the unwanted catches ratio.
** "Wanted" and "unwanted" catch are used to describe fish that would be landed and discarded, respectively, in the absence of the EU landing obligation, based on discard rate estimates for 2016–2018.
*** SSB 2021 relative to SSB 2020.
^ Total catch in 2020 relative to TAC in 2019 (1242 tonnes).
^^ Advice value for 2020 relative to the advice value for 2019 (1272 tonnes).
^^^ EU multiannual plan (MAP) for the Western Waters (EU, 2019).

The advice has increased because of an upward revision in stock size and an increase in SSB.

Basis of the advice

Table 4 Sole in Division 7.e. The basis of the advice.

Advice basis	Management plan
Management plan	The EU multiannual plan (MAP) for stocks in in the Western Waters and adjacent waters applies to this stock. The plan specifies conditions for setting fishing opportunities depending on stock status and making use of the F_{MSY} range for the stock. In accordance with the MAP, catches higher than those corresponding to FMSY can only be taken providing SSB is greater than $MSYB_{trigger}$, and one of the following conditions is met: a) if it is necessary for the achievement of objectives of mixed fisheries; b) if is necessary to avoid serious harm to a stock caused by intra- or inter-specific stock dynamics; c) in order to limit variations in fishing opportunities between consecutive years to not more than 20%. ICES considers that the F_{MSY} range for this stock used in the MAP is precautionary. Full details of the plan are described in EU (2019).

Quality of the assessment

The assessment is relatively uncertain since the historical perception of SSB and F changes between years. Compared to last year's assessment, the SSB is revised upward and F is revised downward.

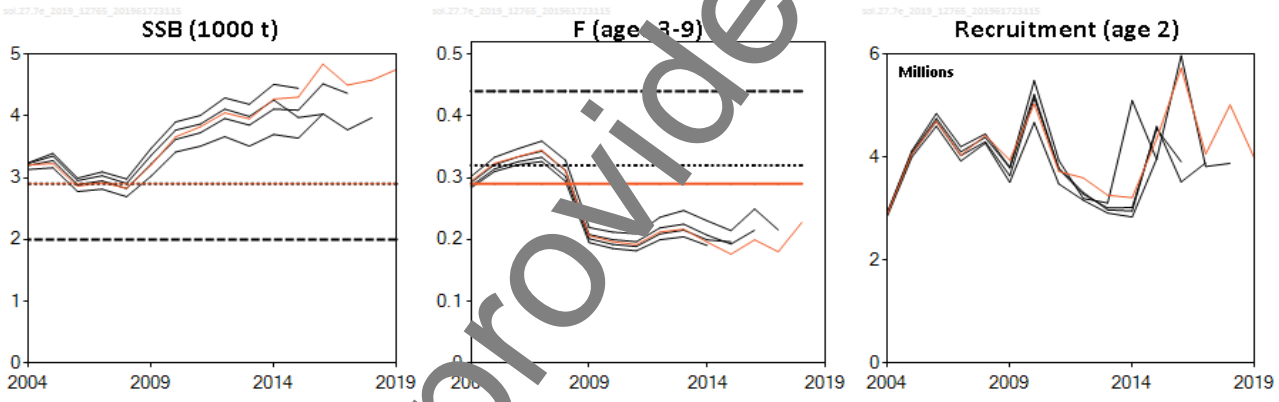

Figure 2 Sole in Division 7.e. Historical assessment results (final-year recruitment assumptions included).

Issues relevant for the advice

There is no information to present to this stock.

Reference points

Table 5 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	Tonnes; The 5th percentile of the distribution of SSB when fishing at F_{MSY} (0.29) with no error.	ICES (2017)
	F_{MSY}	0.29	Median point estimate of EqSim simulations.	ICES (2017)
Precautionary approach	B_{lim}	2000	Tonnes; Rounded B_{pa}/1.4	ICES (2017)
	B_{pa}	2900	Tonnes; Rounded B_{loss} (1999 year class). Lowest SSB with high recruitment.	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}	0.32	$F_{lim} \times \exp(-1.645 \times \sigma)$; $\sigma = 0.2$.	ICES (2017)
Management plan	MAP MSY $B_{trigger}$	2900	Tonnes; MSY $B_{trigger}$	EU (2019), ICES (2017)
	MAP B_{pa}	2900	Tonnes; B_{pa}	EU (2019), ICES (2017)
	MAP B_{lim}	2000	Tonnes; B_{lim}	EU (2019), ICES (2017)
	MAP F_{MSY}	0.29	F_{MSY}	EU (2019), ICES (2017)
	MAP range F_{lower}	0.16	Minimum F which produces at least 95% of maximum yield.	EU (2019), ICES (2017)
	MAP range F_{upper}	0.34	Maximum F which produces at least 95% of maximum yield.	EU (2019), ICES (2017)

Basis of the assessment

Table 6 Sole in Division 7.e. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2018)
Assessment type	Age-based analytical assessment (XSA) that uses landings in the model, and discards are then included to calculate a catch forecast (ICES, 2019).
Input data	Commercial catch-at-age data; two survey indices (UK-FSP and UK-Q1SWBeam) and two commercial tuning fleets (UK-CBT-late and UK-CBT); 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)

Information from stakeholders

There is no additional available information.

History of the advice, catch, and management

Table 7 Sole in Division 7.e. History of ICES advice, agreed TAC, official landings, and ICES estimates for landings and discards. All 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 t; 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	940	800	
1995	No increase in F		860	950	880	856	
1996	$F_{1996} < F_{1994}$		680	760	740	833	
1997	No increase in F		690	750	860	949	
1998	No increase in F		670	670	770	880	
1999	Reduce F below F_{pa}		670	700	660	957	
2000	Reduce F below F_{pa}		< 670	660	660	914	
2001	Reduce F below F_{pa}		< 780	600	650	1069	
2002	Reduce F below F_{pa}		< 650	525	540	1106	
2003	Rebuilding plan or F = 0			394	620	1078	
2004	F = 0 or recovery plan 1		0	300	490	1075	
2005	80% reduction in F or recovery plan		< 230	865	960	1039	
2006	80% reduction in F or recovery plan		< 240	940	961	1022	
2007	68% reduction in F or recovery plan		< 350	900	954	1015	
2008	75% reduction in F		< 260	765	812	908	
2009	70% reduction in F		< 320	650	784	701	
2010	Reduce fishing effort and catches		-	618	761	698	
2011	MSY framework		< 660	710	876	801	
2012	MSY framework		< 740	777	870	872	2
2013	MSY framework		< 960	894	889	883	1
2014	MSY approach		< 832	832	886	885	10
2015	MSY approach		< 851	851	777	774	54
2016	MSY approach		≤ 1226	979	914	913	10
2017	MSY approach	≤ 1198		1178	1000 *	1007	4
2018	MSY approach	≤ 1239		1202	1074 *	1075	3
2019	MSY approach	≤ 1272		1242			
2020	Management plan	1478 (range 878–1685)					

* Preliminary.

History of the catch and landings

Table 8 Sole in Division 7.e. Catch distribution by fleet in 2018 as estimated by ICES.

Catch	Landings				Discards			
	Beam trawl	Otter trawl	Gillnets	Other gears	Beam trawl	Otter trawl	Gillnets	Other gears
1078 tonnes	63%	19%	13%	5%	4%	96%	< 1%	0%
	1075 tonnes				3 tonnes			

Table 9 Sole in Division 7.e. History of official landings and ICES estimates. All weights are in tonnes.

Year	Belgium	France	Netherlands	Ireland	UK and Channel Islands	Official total	ICES landings	ICES discards
1974		323					427	
1975	3	271			217		491	
1976	4	352			260		616	
1977	3	331			272		606	
1978	4	384			453		861	
1979	1	515			665		1181	
1980	45	447		13	764		1269	
1981	16	415	1		788		1215	
1982	98	321			1028		1446	
1983	47	405	3		1043		1498	
1984	48	421			901		1370	
1985	58	130			911		1409	
1986	62	467			840		1419	
1987	48	432			632		1280	
1988	67	98			784		1444	
1989	69	112	6		613		1390	
1990	41	81			636		1315	
1991	35	325			477		852	
1992	41	267			468		895	
1993	59	236			598		904	
1994	33	257			516		800	
1995	21	294			565		856	
1996	8	297			427		833	
1997	13	348		1	476		949	
1998	40	343			389		880	
1999	13				396		957	
2000	4	241			413		914	
2001	19	224			407		1069	
2002	33	198			309		1106	
2003	1	363		1	255		1078	
2004	7	302			185		1075	
2005	26	406			527		1039	
2006	32	357			572		1022	
2007	34	384			536		1015	
2008	28	312		0	472		908	
2009	17	386			381		701	
2010	17	375			370		698	
2011	22	424			431		801	
2012	39	325		0	506		872	2
2013	30	319			540		883	1
2014	25	351			509		884	10
2015	42	245		0	490		774	54
2016	46	248			623		913	10
2017 ^	56	298		< 1	746		1007	4
2018 ^	68	217	< 1	< 1	789		1075	3

^ Preliminary.

Summary of the assessment

Table 10 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	2792	3403	616		0.180
1977	6557	4098	606		0.130
1978	4658	4074	861		0.178
1979	4389	4865	1181		0.24
1980	4703	5338	1269		0.23
1981	8131	4572	1215		0.27
1982	4680	4575	1446		0.32
1983	3867	4374	14[illegible]		0.36
1984	5969	4431	1370		0.30
1985	6984	4010	1409		0.33
1986	3766	4015	1[illegible]19		0.31
1987	5850	4113	12[illegible]0		0.29
1988	3881	4045	[illegible]44		0.33
1989	3738	3445	1390		0.41
1990	2820	3290	1315		0.40
1991	7176	2996	852		0.27
1992	3910	2943	895		0.24
1993	3356	2818	904		0.31
1994	2386	[illegible]064	800		0.23
1995	3469	3[illegible]31	856		0.29
1996	3966	[illegible]	833		0.26
1997	3374	2941	949		0.32
1998	4450	2939	880		0.29
1999	3616	2868	957		0.32
2000	6647	2916	914		0.30
2001	5472	2958	1069		0.34
2002	3[illegible]64	3091	1106		0.33
2003	54[illegible]	3392	1078		0.25
2004	2896	3211	1075		0.29
2005	4068	3231	1039		0.32
2006	4[illegible]98	2863	1023		0.33
2007	[illegible]039	2922	1015		0.34
2008	4426	2832	908		0.31
2009	3943	3206	701		0.21
2010	5038	3664	698		0.196
2011	3725	3825	801		0.192
2012	3597	4053	872	2	0.21
2013	3260	3956	883	1	0.22
2014	3215	4277	885	10	0.196
2015	4354	4307	774	54	0.176
2016	5735	4843	913	10	0.199
[illegible]017	4061	4502	1007	4	0.180
20[illegible]	5018	4584	1075	3	0.23
201[illegible]	3973*	4756			

*Geometric mean (1969–2018).
**Discards are not included in the assessment.

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