Witch (*Glyptocephalus cynoglossus*) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)

ICES advice on fishing opportunities

ICES advises that when the maximum sustainable yield (MSY) approach is applied, catches in 2026 should be no more than 2 187 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 at F_{MSY}; spawning-stock size is above MSY $B_{trigger}$, B_{PA}, and B_{lim}.

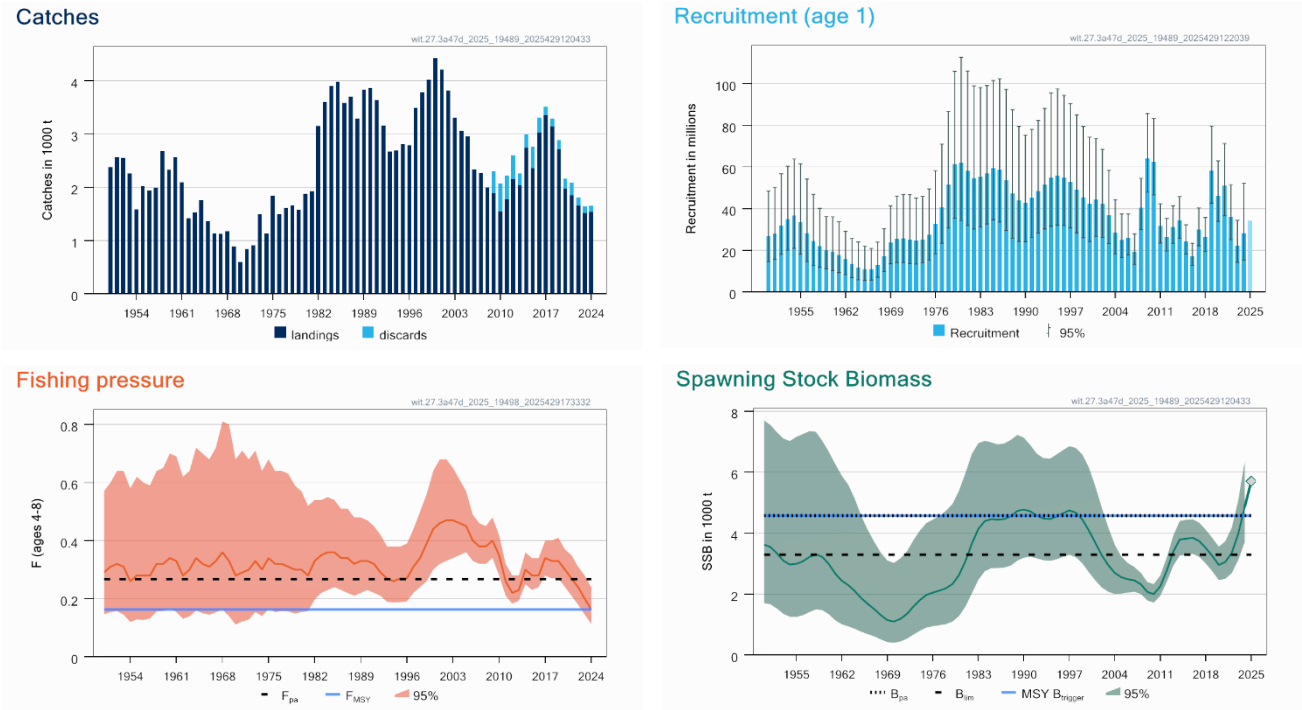

Figure 1 Witch in Subarea 4 and divisions 3.a and 7.d. Summary of the stock assessment. The assumed recruitment value for 2025 is shaded in a lighter colour. Discard information is included in the assessment since 2009 and includes below minimum size (BMS) landings since 2018. Spawning-stock biomass (SSB) is at spawning time (01 July), and the predicted value for 2025 is highlighted with a diamond.

Catch scenarios

Table 1 Witch in Subarea 4 and divisions 3.a and 7.d. Values in the forecast and for the interim year.

Variable	Value	Notes
$F_{ages\ 4–8}$ (2025)	0.157	Based on catch constraint for 2025 and exploitation pattern in 2024
Spawning-stock biomass (SSB; 2025)	5702	Short-term forecast (STF). SSB estimated at 01 July (i.e. spawning time); tonnes
$R_{age\ 1}$ (2025, 2026, 2027)	34290	Resampled recruitments from the years 2009–2024 (geometric mean shown); thousands
Total catch (2025)	1969	Total allowable catch (TAC) including third countries for 2025 (EU, 2024); tonnes
Projected landings (2025)	1888	STF, assuming average landings ratio by age, 2022–2024; tonnes
Projected discards (2025)	81	STF, assuming average discards ratio by age, 2022–2024; tonnes

Table 2 Witch in Subarea 4 and divisions 3.a and 7.d. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch (2026)	Projected landings (2026)	Projected discards* (2026)	F_{total} (ages 4–8) (2026)	Spawning-stock biomass (SSB)** (2026)	SSB**,*** (2027)	% SSB change ^	% total allowable catch (TAC) change ^^	% advice change ^^^
ICES advice basis									
Maximum sustainable yield (MSY) approach: F_{MSY}	2187	2107	80	0.163	6210	6365	8.9	11.1	11.1
Other scenarios									
$F_{MSY\ upper}$	2877	2770	107	0.222	5992	5771	5.1	46	46
$F_{MSY\ lower}$	1538	1481	57	0.111	6410	6941	12.4	−22	−22
F = 0	0	0	0	0	6865	8381	20	−100	−100
F_{PA}	3376	3248	128	0.267	5839	5357	2.4	71	71
$F = F_{2025}$	2119	2043	76	0.157	6231	6427	9.3	7.6	7.6
$SSB\ (2027) = B_{lim}$	6283	6006	277	0.59	4865	3293	−14.7	220	220
$SSB\ (2027) = B_{PA} = MSY\ B_{trigger}$	4403	4229	174	0.37	5503	4576	−3.5	124	124
Rollover advice	1969	1898	71	0.145	6277	6580	10.1	0	0

* Including below minimum size (BMS) landings, assuming recent discard rate (average of 2022–2024).
** SSB is estimated at spawning time (01 July).
*** Assuming same F_{total} (ages 4–8) in 2027 as in 2026.
^ SSB in 2026 relative to SSB in 2025.
^^ Total advised catch in 2026 relative to the EU–UK agreed catch limit approach for 2025 (1 969 tonnes). This limit reflects the sum of the EU-UK agreed TACs in 2025 (1 847 tonnes), divided by 0.9379 to account for a 6.21% deduction for third-country catches, following the method for projecting third-country catches (EU–UK Joint Committee, 2023).
^^^ Total advised catch in 2026 relative to advice value for 2025 (1 969 tonnes).

The change in advice (+11.1%) is mainly because of an increase of stock size.

Basis of the advice

Table 3 Witch in Subarea 4 and divisions 3.a and 7.d. The basis of the advice.

Advice basis	Maximum sustainable yield (MSY) approach
Management plan	The EU multiannual plan (MAP) for stocks in the North Sea (EU, 2018) and adjacent waters applies to bycatches of this stock. Neither Norway nor UK has requested ICES to provide advice based on the EU MAP. The MAP stipulates that when the F_{MSY} ranges are not available, fishing opportunities should be based on the best available scientific advice.

Quality of the assessment

The assessment results are fairly consistent year by year for SSB, and there are significant differences in fishing mortality and recruitment that do not show a systematic trend. Larger individuals of witch are generally distributed in deeper areas (> 200 m), and the current trawl surveys do not cover areas deeper than 200 m. A fisheries-independent survey using gears suitable for catching large flatfish and covering the entire distribution of the stock would improve the assessment.

Age information is only included in the assessment from 2009 onwards, increasing the uncertainty of the assessment prior to 2009.

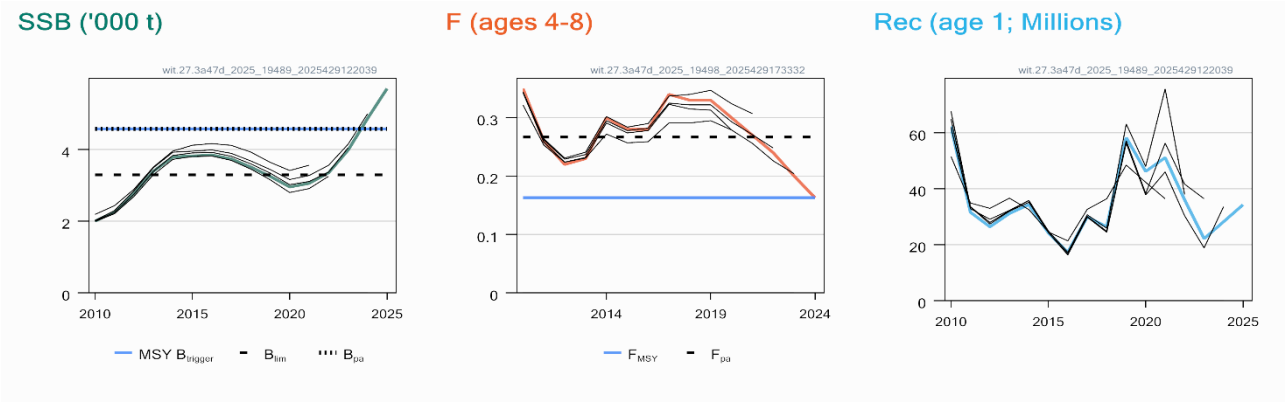

Figure 2 Witch in Subarea 4 and divisions 3.a and 7.d. Historical assessment results (final-year recruitment included for each line, corresponding to the forecast recruitment in the interim year). The reference points were revised in 2023, and only assessment results from the last four years should be compared with the reference points indicated (the advice for 2022 was reissued).

Issues relevant for the advice

There is no information to present for this stock.

Reference points

Table 4 Witch in Subarea 4 and divisions 3.a and 7.d. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
Maximum sustainable yield (MSY) approach	MSY $B_{trigger}$	4576	B_{PA}; in tonnes	ICES (2023a)
	F_{MSY}	0.163	Stochastic simulations (EqSim) based on a segmented regression stock-recruit relationship for 1950–2020	ICES (2023a)
Precautionary approach	B_{lim}	3293	Breakpoint in a segmented regression, based on recruitment 1950–2020; in tonnes	ICES (2023a)
	B_{PA}	4576	$B_{lim} \times \exp(1.645 \times \sigma)$, $\sigma = 0.2$; in tonnes	ICES (2023a)
	F_{PA}	0.267	The F that provides a 95% probability for spawning-stock biomass (SSB) to be above B_{lim} (F_{P05} with advice rule)	ICES (2023a)
EU Management Plan*	MAP MSY $B_{trigger}$	4576	MSY $B_{trigger}$; in tonnes	ICES (2023a)
	MAP B_{lim}	3293	B_{lim}; in tonnes	ICES (2023a)
	MAP F_{MSY}	0.163	F_{MSY}	ICES (2023a)
	MAP range F_{lower}	0.111–0.163	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2023a)
	MAP range F_{upper}	0.163–0.222	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2023a)

* EU multiannual plan (MAP) for the North Sea (EU, 2018).

Basis of the assessment

Table 5 Witch in Subarea 4 and divisions 3.a and 7.d. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023b)
Assessment type	Age-based analytical assessment* (SAM; Nielsen and Berg, 2014; Berg and Nielsen, 2016; ICES, 2025) that uses catches in the model and in the forecast
Input data	Commercial catches (international landings and ages from catch sampling by métier, raised in InterCatch). Indices from three surveys (IBTS Q1 [G1022] from 1983, IBTS Q3 [G2829] from 1991, and BTS Q3 [B2453] from 1991); total biomass until 2008, age-based from 2009 onwards. Assumed constant natural mortality (over ages and years) and maturity ogive (over years). Spawning-stock biomass (SSB) is estimated at the middle of the year (i.e., spawning time). Stock weights-at-age are assumed constant across years and were obtained from IBTS data, aggregated across quarters for the period 2009–2016.
Discards, below minimum size (BMS) landings, and bycatch	Discard information included in the assessment since 2009. The discard rate in 2024 is 10.5% of the total catches. BMS landings, where reported to ICES, are included with discards in the assessment since 2018.
Indicators	None
Other information	Last benchmarked in 2018 (ICES, 2018), interbenchmark in 2021 (ICES, 2021) and revised in 2023 (ICES, 2023a)
Working group	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK)

* View assessment in Transparent Assessment Framework (TAF).

History of the advice, catch, and management

Table 6 Witch in Subarea 4 and divisions 3.a and 7.d. ICES advice, total allowable catches (TACs), official landings and ICES catch estimates. All weights are in tonnes.

Year	ICES advice	Witch		Witch and lemon sole		Witch				
		Predicted landings corresponding to advice	Predicted catches corresponding to advice	Agreed TAC*	Official landings	Agreed TAC***	Official landings	ICES landings	ICES discards^^	ICES catch
				Division 2.a and Subarea 4	Subarea 4 and divisions 3.a and 7.d	Subarea 4 and divisions 3.a and 7.d				
2006				6175	6593		2304	2335	296	2631
2007				6175	6725		2237	2271	199	2470
2008				6793	5929		1953	1999	318	2317
2009				6793	5212		1817	1863	455	2319
2010				6521	4690		1489	1531	559	2090
2011				6391	5575		1530	1567	547	2114
2012	Reduce catches			6391	5967		1896	1952	555	2507
2013	No new advice; same as for 2012			6391	5756		1993	2013	254	2267
2014	Decrease landings by 4% (average of the last three years)	< 1574**		6391	6341		2649	2685	307	2992
2015	No new advice; same as for 2014	< 1574**		6391	5676		2196	2240	449	2690
2016	Precautionary approach (increase catches by no more than 20%)		≤ 2212	6391	6492		2685	2744	390	3135
2017	Precautionary approach (same advised catch value as given for 2016)		≤ 2212	6391	6208		2865	2850	236	3086
2018	Precautionary approach (increase catches by no more than 8%)		≤ 2390	6391	6026		3006	3010	199	3209
2019	Precautionary approach (same advised catch value as given for 2018)		≤ 2390	7874	5808		2567	2580	217	2797
2020	Precautionary approach		≤ 1651	6785	4589		1933	1937	198	2135
2021	Maximum sustainable yield (MSY) approach		≤ 1733	5428	3541		1786	1827	260	2087
2022	MSY approach		≤ 1206	4287	3097		1591	1593	200	1793

Year	ICES advice	Witch		Witch and lemon sole		Witch				
		Predicted landings corresponding to advice	Predicted catches corresponding to advice	Agreed TAC*	Official landings	Agreed TAC***	Official landings	ICES landings	ICES discards^^	ICES catch
				Division 2.a and Subarea 4	Subarea 4 and divisions 3.a and 7.d	Subarea 4 and divisions 3.a and 7.d				
2023	MSY approach		≤ 1198	3140	2942^		1463^	1463	166	1629
2024	MSY approach		≤ 1579			1481	1429^	1427	167	1593
2025	MSY approach		≤ 1969			1847				
2026	MSY approach		≤ 2187							

* A combined TAC for witch and lemon sole in EU waters of Subarea 4 and Division 2.a up to 2020 and in UK and EU waters of 4; UK waters of 2.a thereafter.
** Advice based on official landings.
*** The total EU–UK agreed catch limit representing the sum of TACs for witch in (1) UK and EU waters of Subarea 4 and UK water of Division 2.a, (2) EU waters of Division 3.a, and (3) UK and EU waters of Division 7.d. This total is then divided by 0. 9379 to account for a 6.21% deduction for third-country catches, following the method for projecting third-country catches (EU-UK Joint Committee, 2023).
^ Preliminary.
^^ Since 2018, discards estimated by ICES Include below minimum size (BMS) landings.

History of the catch and landings

Table 7 Witch in Subarea 4 and divisions 3.a and 7.d. Catch distribution by fleet in 2024 as used in the assessment model.

Catch	Landings		Discards*	
1 593 tonnes	Bottom otter trawl 92%	Others 8%	Bottom otter trawl 97%	Others 3%
	1 427 tonnes		167 tonnes	

* Discards include below minimum size (BMS) landings from EU and UK fleets.

Table 8 Witch in Subarea 4 and divisions 3.a and 7.d. History of commercial landings; the official landings and below minimum size (BMS) landings are presented by area (Division 3.a and Subarea 4) for each country participating in the fishery, along with the ICES estimates (Subarea 4 and divisions 3.a and 7.d). Official landings for Division 7.d are always smaller than 1 tonne and not reported in the table. All weights are in tonnes.

Year	Belgium	Germany		Denmark		Faroe Islands	France	Netherlands		Norway		Sweden		UK	Total landings	BMS landings	ICES estimates (4, 3.a, 7.d)		
	4	3.a	4	3.a	4	4	4	3.a	4	3.a	4	3.a	4	4	3.a and 4		landings	Discards**	catches
1968	15	0	21	173	108	0	0	0	0	12	5	0	0	840	1174				
1969	3	0	9	150	153	0	0	0	0	6	7	0	0	563	891				
1970	5	0	5	108	112	0	0	0	0	10	9	0	0	348	597				
1971	6	0	6	142	191	0	0	0	0	20	16	0	0	462	843				
1972	0	0	12	219	221	0	0	0	0	16	16	0	0	424	908				
1973	0	0	25	253	215	0	0	0	0	24	516	0	0	461	1494				
1974	0	0	18	291	221	0	0	0	0	13	3	0	0	592	1138				
1975	0	0	20	484	242	0	0	0	0	14	2	474	20	585	1841				
1976	0	0	24	441	175	0	0	0	0	18	3	319	5	511	1496				

Year	Belgium	Germany		Denmark		Faroe Islands	France	Netherlands		Norway		Sweden		UK	Total landings	BMS landings	ICES estimates (4, 3.a, 7.d)		
	4	3.a	4	3.a	4	4	4	3.a	4	3.a	4	3.a	4	4	3.a and 4		landings	Discards**	catches
1977	0	0	73	444	92	0	0	0	0	13	2	281	0	713	1618				
1978	0	0	37	473	87	0	1	0	0	14	1	232	0	819	1664				
1979	0	0	7	456	91	0	3	0	0	21	1	201	0	792	1572				
1980	0	0	23	569	111	0	2	0	0	49	2	256	0	871	1883				
1981	0	0	17	643	123	0	0	0	0	94	2	307	0	747	1933				
1982	0	0	16	953	495	0	0	0	0	79	2	421	4	1185	3155				
1983	0	0	19	1108	685	0	5	0	0	99	2	391	1	1296	3606				
1984	0	0	11	1158	687	0	4	0	0	158	3	480	3	1399	3903				
1985	0	0	21	1374	460	0	1	0	0	98	2	449	3	1571	3979				
1986	0	0	18	992	436	0	12	0	0	82	2	352	3	1682	3579				
1987	0	0	7	894	571	0	35	0	0	86	5	272	3	1827	3700				
1988	0	0	6	810	447	0	13	0	9	74	9	326	3	1593	3290				
1989	0	0	5	963	452	0	14	0	10	164	15	393	4	1821	3841				
1990	0	0	3	994	532	0	20	0	4	157	40	347	6	1759	3862				
1991	0	0	3	789	512	0	9	0	2	160	75	352	12	1727	3641				
1992	0	0	5	609	460	0	13	0	7	134	46	494	5	1391	3164				
1993	0	0	3	453	383	0	14	0	13	100	52	397	3	1255	2673				
1994	0	0	5	400	458	1	2	0	14	61	57	310	3	1385	2696				
1995	0	0	9	513	384	4	0	0	7	86	14	340	2	1451	2810				
1996	0	0	7	563	434	0	0	0	0	66	14	273	2	1431	2790				
1997	0	0	9	1074	488	1	0	0	1	76	10	352	3	1480	3494				
1998	0	0	13	1430	476	1	0	0	4	112	27	444	4	1275	3786				
1999	0	1	8	1629	486	1	0	0	9	111	23	499	2	1256	4025				
2000	0	0	13	1821	517	0	0	0	7	85	12	571	8	1388	4422				
2001	0	0	8	1304	744	0	0	0	1	72	16	563	12	1486	4206				
2002	0	0	5	1364	543	0	0	0	0	66	16	576	8	1062	3640		3813	1529	5341
2003	0	0	2	1036	771	0	0	0	0	64	23	546	3	836	3281		3308	349	3657
2004	0	1	3	1188	623	0	0	0	1	51	36	549	3	575	3030		3059	369	3428
2005	0	3	4	1006	715	0	0	0	4	42	40	557	2	443	2816		2960	419	3379
2006	0	2	6	635	654	0	< 0.5	0	3	37	31	369	2	564	2303		2335	296	2631
2007	0	2	10	618	531	0	< 0.5	0	7	45	28	284	6	706	2236		2271	199	2470
2008	0	1	6	476	351	0	0	0	19	46	58	260	19	717	1952		1999	318	2317
2009	0	0	5	593	350	0	0	0	12	28	57	152	6	615	1817		1863	455	2319
2010	0	1	7	537	251	0	0	0	9	25	40	112	1	507	1489		1531	559	2090
2011	0	1	25	565	245	0	< 0.5	0	18	23	25	104	1	523	1530		1567	547	2114
2012	0	0	4	921	246	0	< 0.5	0	19	31	20	153	2	499	1895		1952	555	2507
2013	5	1	6	803	252	0	< 0.5	0	21	28	89	169	1	618	1992		2013	254	2267
2014	15	1	7	1275	237	0	< 0.5	2	24	24	119	260	1	683	2649		2685	307	2992

Year	Belgium	Germany		Denmark		Faroe Islands	France	Netherlands		Norway		Sweden		UK	Total landings	BMS landings	ICES estimates (4, 3.a, 7.d)		
	4	3.a	4	3.a	4	4	4	3.a	4	3.a	4	3.a	4	4	3.a and 4		landings	Discards**	catches
2015	12	< 0.5	7	943	291	0	< 0.5	2	12	25	92	282	0	532	2196		2240	449	2690
2016	12	< 0.5	10	989	534	0	< 0.5	10	20	39	164	210	2	694	2684		2744	390	3135
2017	9	< 0.5	8	945	542	0	< 0.5	3	70	27	107	214	1	939	2865	< 0.5	2850	236	3086
2018	16	1	15	795	499	0	< 0.5	2	108	20	255	160	1	1133	3006	< 0.5	3010	199	3209
2019	23	0	18	571	640	0	< 0.5	< 0.5	108	11	213	115	3	864	2566	1	2580	216	2797
2020	16	6	9	526	371	0	< 0.5	< 0.5	85	13	124	79	8	697	1933	1	1937	198	2135
2021	2	2	5	505	282	0	< 0.5	< 0.5	16	7	124	33	6	803	1786	< 0.5	1827	260	2087
2022	9	1	8	630	140	0	< 0.5	0	22	11	60	36	6	666	1590	< 0.5	1593	200	1793
2023*	6	6	10	540	122	0	< 0.5	< 0.5	13	8	68	58	4	628	1463	< 0.5	1463	166	1629
2024*	5	10	13	629	122	0	< 0.5	< 0.5	16	9	48	69	3	503	1429	< 0.5	1427	167	1593

* Official landings are preliminary.

** Since 2018, discards estimated by ICES Include BMS landings.

Summary of the assessment

Table 9 Witch in Subarea 4 and divisions 3.a and 7.d. Assessment summary. Recruitment is in thousands; all weights are in tonnes. "Low" and "High" refer to 95% confidence intervals.

Year	Recruitment (age 1)			Spawning-stock biomass (SSB)**			Catches***		Fishing pressure (ages 4–8)		
	Low	R	High	Low	SSB	High	Landings***	Discards***,^	Low	F	High
1950	14594	26624	48571	1706	3626	7705	2379		0.146	0.29	0.57
1951	15673	28059	50233	1666	3548	7556	2568		0.154	0.31	0.60
1952	18082	32041	56774	1523	3339	7317	2554		0.157	0.32	0.64
1953	20095	34844	60420	1349	3097	7108	2263		0.145	0.31	0.64
1954	21001	36620	63858	1255	2969	7026	1590		0.120	0.26	0.58
1955	18144	33429	61593	1251	2993	7163	2027		0.129	0.28	0.62
1956	14629	28183	54296	1303	3075	7253	1936		0.127	0.28	0.60
1957	12823	24514	46863	1408	3217	7351	1991		0.132	0.28	0.59
1958	11899	21862	40169	1494	3309	7328	2678		0.156	0.32	0.64
1959	11104	20046	36190	1472	3218	7032	2333		0.157	0.32	0.65
1960	10240	19227	36101	1334	2984	6673	2563		0.167	0.34	0.70
1961	9295	17720	33783	1136	2667	6264	2093		0.154	0.33	0.69
1962	8368	15617	29144	1007	2435	5888	1419		0.131	0.28	0.62
1963	7021	13442	25732	940	2292	5586	1523		0.139	0.30	0.64
1964	5852	11863	24048	857	2096	5126	1760		0.159	0.34	0.72
1965	5567	11085	22072	761	1863	4560	1356		0.150	0.32	0.70
1966	5774	10991	20923	684	1675	4102	1137		0.145	0.31	0.68
1967	7077	13027	23981	608	1503	3712	1125		0.153	0.33	0.72
1968	9755	17214	30377	510	1308	3359	1174		0.162	0.36	0.81
1969	13541	23665	41357	423	1146	3104	891		0.140	0.33	0.80
1970	14156	25528	46033	398	1097	3026	597		0.111	0.28	0.68
1971	14203	25785	46810	443	1185	3171	843		0.122	0.29	0.71
1972	13715	25327	46770	533	1347	3400	908		0.128	0.30	0.68
1973	13447	24627	45101	668	1587	3769	1494		0.154	0.33	0.71
1974	13967	25334	45952	794	1801	4086	1138		0.140	0.30	0.64
1975	15215	27440	49487	900	1974	4334	1841		0.164	0.34	0.68
1976	18381	32724	58260	943	2048	4445	1496		0.154	0.32	0.64
1977	23427	40777	70974	977	2113	4569	1618		0.157	0.32	0.64
1978	30690	51573	86666	1012	2188	4733	1664		0.156	0.31	0.63
1979	35464	61309	105989	1093	2328	4956	1572		0.149	0.30	0.59
1980	34299	62183	112736	1271	2615	5383	1883		0.154	0.30	0.57
1981	31934	58212	106112	1581	3072	5967	1933		0.157	0.28	0.52
1982	30244	54719	99001	2022	3655	6605	3155		0.197	0.33	0.54
1983	31264	55404	98183	2463	4139	6955	3606		0.22	0.35	0.54
1984	32632	56878	99140	2751	4398	7033	3903		0.23	0.36	0.55
1985	34696	59359	101556	2850	4461	6981	3979		0.24	0.36	0.54
1986	33568	58631	102408	2856	4444	6915	3579		0.23	0.34	0.51
1987	29501	53570	97276	2869	4465	6948	3700		0.22	0.34	0.51
1988	25812	47524	87499	2937	4555	7065	3290		0.21	0.32	0.48
1989	24267	43928	79517	3095	4729	7227	3841		0.22	0.33	0.48
1990	24187	42688	75338	3193	4774	7139	3862		0.23	0.33	0.47
1991	26252	45282	78109	3228	4717	6893	3641		0.22	0.32	0.45
1992	28341	48330	82418	3169	4577	6613	3164		0.21	0.29	0.42
1993	30264	51653	88158	3112	4485	6463	2673		0.189	0.27	0.38
1994	31525	54915	95661	3088	4461	6444	2696		0.187	0.26	0.38
1995	32086	55963	97610	3138	4544	6581	2810		0.188	0.27	0.38
1996	31889	54884	94461	3215	4649	6725	2790		0.191	0.27	0.39
1997	30855	52833	90464	3288	4748	6857	3494		0.22	0.31	0.44
1998	28483	49232	85096	3211	4673	6799	3786		0.24	0.34	0.50
1999	26089	45533	79468	3007	4449	6583	4024		0.26	0.39	0.56
2000	24297	42512	74380	2715	4091	6165	4422		0.30	0.44	0.64
2001	26746	44395	73689	2449	3685	5546	4206		0.32	0.46	0.68

Year	Recruitment (age 1)			Spawning-stock biomass (SSB)**			Catches***		Fishing pressure (ages 4–8)		
	Low	R	High	Low	SSB	High	Landings***	Discards***,^	Low	F	High
2002	26208	42387	68554	2214	3273	4838	3813		0.33	0.47	0.68
2003	23220	36822	58390	2074	2947	4186	3308		0.34	0.47	0.65
2004	18324	28502	44332	2005	2694	3621	3059		0.35	0.46	0.61
2005	16511	24889	37517	2017	2554	3233	2960		0.36	0.45	0.57
2006	17825	25863	37527	2048	2486	3019	2335		0.33	0.40	0.49
2007	13327	19288	27915	2076	2450	2892	2271		0.32	0.38	0.46
2008	30009	40479	54602	2004	2326	2701	1999		0.32	0.38	0.45
2009	47956	64088	85648	1788	2071	2399	1894	409	0.34	0.40	0.48
2010	46599	62309	83314	1719	2001	2329	1550	524	0.28	0.35	0.42
2011	23550	31588	42370	1943	2255	2616	1772	448	0.21	0.26	0.32
2012	19702	26390	35349	2402	2777	3210	2153	447	0.183	0.22	0.28
2013	23386	31135	41451	2932	3393	3927	2033	225	0.193	0.23	0.28
2014	25701	34323	45835	3267	3794	4405	2741	251	0.25	0.30	0.36
2015	18241	24254	32250	3285	3819	4441	2363	399	0.23	0.28	0.34
2016	12759	17278	23396	3321	3848	4459	3025	287	0.24	0.28	0.34
2017	22210	29949	40384	3217	3738	4343	3360	150	0.28	0.34	0.40
2018	19480	26394	35762	3000	3512	4111	3141	152	0.27	0.33	0.40
2019	42682	58304	79642	2747	3251	3846	2707	183	0.27	0.33	0.41
2020	33910	46197	62937	2456	2956	3558	1980	184	0.24	0.30	0.37
2021	36662	51126	71297	2500	3056	3736	1855	228	0.21	0.27	0.35
2022	25179	36035	51573	2686	3353	4185	1653	159	0.179	0.24	0.31
2023	14256	22156	34435	3118	3984	5090	1522	126	0.145	0.20	0.28
2024	15217	28198	52250	3710	4867	6385	1541	117	0.113	0.163	0.24
2025		34290*			5702^^						

* Recruitment in 2025 is the geometric mean of resampled recruitment estimates from 2009 to 2024.
** SSB is estimated at spawning time (01 July).
*** Any differences between catches values in Table 9 and others in the advice are due to sum of product (SOP) values from the catch and weight-at-age, as used in the assessment model.
^ Since 2018, discards include below minimum size (BMS) landings from EU and UK fleets.
^^ From the short-term forecast.

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