

Saithe (*Pollachius virens*) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2024 should be no more than 73 815 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 above MSY $B_{trigger}$, B_{pa} , and B_{lim} .

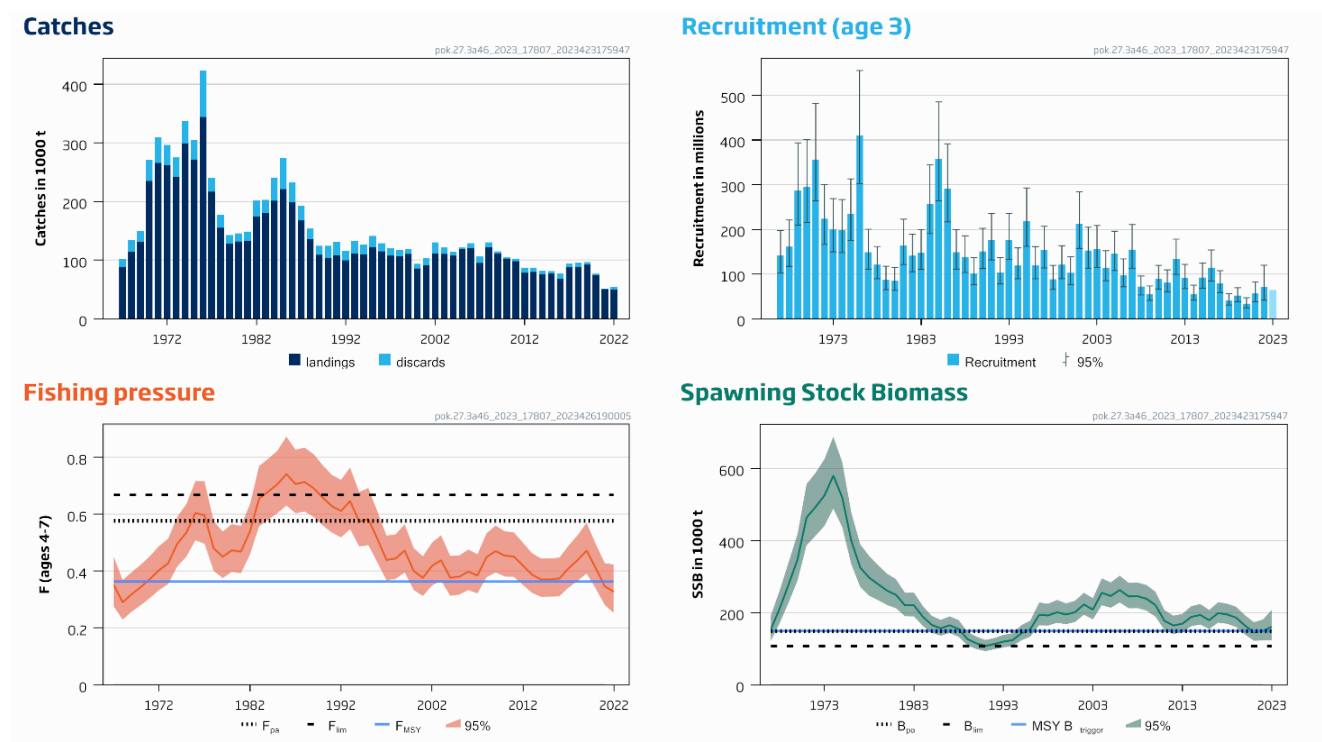


Figure 1 Saithe in subareas 4 and 6 and in Division 3.a. Summary of the stock assessment. The assumed recruitment value for 2023 is shaded in a lighter colour. Landings and discards are for ages 3–10+ only, as used in the assessment. Discards include below minimum size (BMS) landings.

Conservation status

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

Catch scenarios

Table 1 Saithe in subareas 4 and 6, and in Division 3.a. Values in the forecast and for the interim year.

Variable	Value	Notes
$F_{ages\ 4-7}$ (2023)	0.33	Average exploitation pattern (2020–2022) scaled to the total F in 2022

Variable	Value	Notes
SSB (2024)	177053	Short-term forecast (STF); tonnes
$R_{age\ 3}$ (2023–2024)	64320	Resampled recruitment from the years 2013–2022 (geometric mean shown); thousands
Total catch (2023)	61635	STF, <i>F status quo</i> assumption; tonnes
Projected landings (2023)	58556	STF, assuming average landings ratio by age 2020–2022; tonnes
Projected discards (2023)	3079	STF, assuming average landings ratio by age 2020–2022; tonnes

Table 2 Saithe in subareas 4 and 6 and in Division 3.a. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2024)	Projected landings (2024)	Projected discards* (2024)	Projected landings ##		F _{total} (ages 4–7) (2024)	F _{projected landings} (ages 4–7) (2024)	F _{projected discards} (ages 4–7) (2024)	SSB (2025)	% SSB change **	% TAC change #	% advice change ^
				Division 3.a and Subarea 4	Subarea 6							
ICES advice basis												
MSY approach: F _{MSY}	73815	70239	3576	63637	6602	0.363	0.35	0.0160	183531	3.7	25	25
Other scenarios												
F _{MSY} lower	45431	43278	2153	39210	4068	0.210	0.20	0.0100	209246	18.2	–23	–23
F _{MSY} upper	105944	100732	5212	91263	9469	0.564	0.54	0.026	154584	–12.7	80	80
F = 0	0	0	0	0	0	0	0	0	251094	42	–100	–100
F _{pa}	107702	102392	5310	92767	9625	0.576	0.55	0.026	153011	–13.6	83	83
F _{lim}	120526	114599	5927	103827	10772	0.668	0.64	0.030	141609	–20	105	105
SSB (2025) = B _{lim}	162596	154340	8256	139832	14508	1.01	0.97	0.046	107297	–39	176	176
SSB (2025) = B _{pa} = MSY B _{trigger}	114448	108770	5678	98546	10224	0.62	0.59	0.028	149098	–15.8	94	94
F = F ₂₀₂₃	67384	64129	3255	58101	6028	0.33	0.31	0.0150	189267	6.9	14.4	14.4
TAC ₂₀₂₃	58912	56097	2815	50824	5273	0.28	0.27	0.0120	197020	11.3	0	0
TAC ₂₀₂₃ –15%	50074	47677	2397	43195	4482	0.23	0.22	0.0110	205065	15.8	–15.0	–15.0
TAC ₂₀₂₃ +15%	67749	64473	3276	58413	6060	0.33	0.31	0.0150	188949	6.7	15.0	15.0
TAC ₂₀₂₃ –20%	47130	44884	2246	40665	4219	0.22	0.21	0.0100	207708	17.3	–20.0	–20.0
TAC ₂₀₂₃ +25%	73641	70073	3568	63486	6587	0.36	0.35	0.0160	183701	3.8	25	25

* Including BMS landings. Assuming recent discard rate.

** SSB 2025 relative to SSB 2024.

Total catch in 2024 relative to the TAC in 2023 (58912 tonnes).

Projected landings split according to the average in 1993–1998, as agreed by the relevant management authorities, i.e. 90.6% in Subarea 4 and Subdivision 3.a.20 and 9.4% in Subarea 6.

^ Total catch in 2024 relative to the advice value 2023 (58912 tonnes).

The change in advice (25%) is due mainly to an upward revision of the stock size and the slightly lower advised fishing mortality last year, when SSB was below MSY B_{trigger}.

Basis of the advice

Table 3 Saithe in subareas 4 and 6, and in Division 3.a. The basis of the advice.

Advice basis	MSY approach.
Management plan	An EU multiannual management plan (MAP) has been agreed by the EU for this stock (EU, 2018). There is no agreement with Norway and UK regarding this plan, and it is not used as the basis of the advice for this shared stock. ICES was requested by EC and UK to provide advice based on ICES MSY approach and to include F_{MSY} ranges in the catch scenarios.

Quality of the assessment

Conflicting signals between the survey and commercial CPUE index prior to 2022 contributes to the assessment uncertainty. However, the two series yield similar signals in the 2022–2023 assessments.

The proportion of landings sampled for ages in 2022 was similar to that in 2021 ($\approx 60\%$) but lower than those in 2020 ($< 70\%$) and 2019 ($\approx 90\%$), due to lack of sampling in the French large mesh otter trawl fleet and a large portion of Norwegian landings missing the data required to assign the age structure correctly. Weights-at-age in the catch and selectivity patterns, however, did not exhibit unreasonable deviations from the previous years.

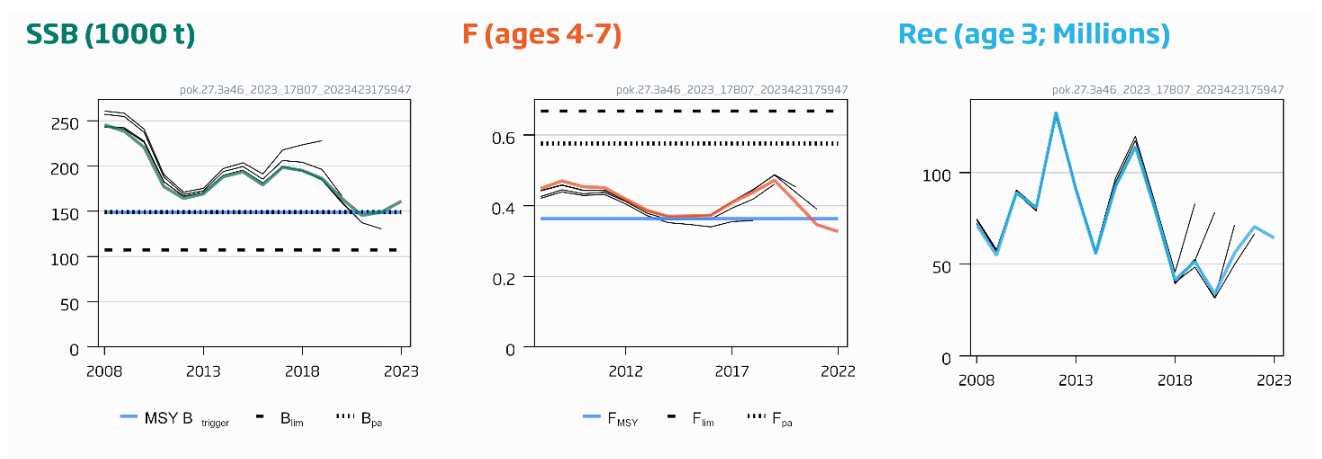


Figure 2 Saithe in subareas 4 and 6 and in Division 3.a. Historical assessment results (final-year recruitment included for each line, corresponding to the forecast recruitment in the interim year).

Issues relevant for the advice

Saithe on the Northern Shelf is under EU landing obligation and Norway and UK national legislation regulating discards. Below minimum size (BMS) landings reported to ICES in 2016–2022 were low. Discarding continues in Division 3.a and Subarea 4, based on observations from sampling programmes. Discards in 2022 increased to 8% after lower discard rate in 2019–2021, likely linked to higher recruitment (age 3) in 2022 compared to the previous four years.

Reference points

Table 4 Saithe in subareas 4 and 6 and in Division 3.a. Reference points, values, and their technical basis. Weights are in tonnes.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	149098	B_{pa} ; in tonnes	ICES (2019)
	F_{MSY}	0.363	EqSim analysis based on the recruitment period 1998–2017	ICES (2019)
Precautionary approach	B_{lim}	107297	B_{loss} ; in tonnes	ICES (2019)
	B_{pa}	149098	$B_{lim} \times \exp(1.645 \times 0.2) \approx 1.4 \times B_{lim}$; in tonnes	ICES (2019)
	F_{lim}	0.668	EqSim analysis based on the recruitment period 1998–2017	ICES (2019, 2021a)
	F_{pa}	0.576	The F that provides a 95% probability for SSB to be above B_{lim} ($F_{P.05}$ with advice rule [AR])	ICES (2021a, 2021b)
EU Management plan (MAP)*	MAP MSY $B_{trigger}$	149098	MSY $B_{trigger}$; in tonnes	ICES (2019)
	MAP B_{lim}	107297	B_{lim} ; in tonnes	ICES (2019)
	MAP F_{MSY}	0.363	F_{MSY}	ICES (2019)
	MAP range F_{lower}	0.210–0.363	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2019)
	MAP range F_{upper}	0.363–0.564	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2019, 2021a)

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

Basis of the assessment

Table 5 Saithe in subareas 4 and 6 and in Division 3.a. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023a)
Assessment type	Age-based analytical assessment SAM (SAM; ICES, 2023b; Nielsen and Berg, 2014) that uses catches and surveys in the model and in the forecast.
Input data	Commercial catches (international landings, BMS landings, discards, and age frequencies from catch sampling); survey index (IBTS Q3 [G2829], ages 3–8); combined commercial index scaled to the exploitable biomass (French, German, and Norwegian trawler fleets). Maturity-at-age and natural mortality are assumed to be constant. Stock weights are equal to catch weights.
Discards, BMS landings, and bycatch	Discards were included, and 48% of the landings had associated discarding information; 75% of the discards were observed, and 25% were raised. Of the imported discards, 99% had been sampled for age information. BMS landings for Norway are included with landings in the assessment since 2016; all other BMS landings (less than 1 tonne in 2022) are included with the discards. Logbook-registered discards were 0 kg.
Indicators	None
Other information	Benchmarked in 2016 (ICES, 2016a) with additional review (ICES, 2016b). An interbenchmark was conducted in 2019 (ICES, 2019).
Working group	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK)

History of the advice, catch, and management

Table 6a Saithe in subareas 4 and 6 and in Division 3.a. **Subarea 4 (North Sea) and Division 3.a (Skagerrak and Kattegat)**. ICES advice, TAC, official landings, and ICES catch estimates (all ages). Weights are in tonnes. Values of official and ICES landings for the period 1987 to 2001 are presented to the nearest thousand tonnes in Subarea 4 and Division 3.a and to the nearest hundred tonnes in Subarea 6. TAC values are presented to the nearest thousand tonnes. Note that before 2000, the advice was provided for two separate areas: Subarea 4 and Division 3.a, and Subarea 6.

Year	Stock			Subarea 4 (North Sea) and Division 3.a (Skagerrak and Kattegat)				
	ICES advice	Total catch corresponding to advice	Landings corresponding to advice	Landings in Subarea 4 and Division 3.a calculated from the advice**	Agreed TAC	Official landings	ICES landings [#]	ICES discards ^{##}
1987	Reduce F		< 198000		173000	154000	149000	
1988	60% of F (86); TAC		156000		165000	113000	107000	
1989	No increase in F; TAC		170000		170000	92000	92000	
1990	No increase in F; TAC		120000		120000	85000	88000	
1991	No increase in F; TAC		125000		125000	93000	99000	
1992	No increase in F; TAC		102000		110000	92000	92000	
1993	70% of F (91) ~ 93000 t		93000		93000	99000	105000	
1994	Reduce F by 30%		72000		97000	90000	102000	
1995	No increase in F		107000		107000	97000	113000	
1996	No increase in F		111000		111000	96000	110000	
1997	No increase in F		113000		115000	86000	103000	
1998	Reduce F by 20%		97000		97000	88000	100000	
1999	Reduce F to F_{pa}		104000		110000	108000	107000	
2000	Reduce F by 30%		81000	75000	85000	85000	87000	
2001	Reduce F by 20%		96000	87000	87000	88000	90000	
2002	$F < F_{pa}$		< 148000	< 135000	135000	115000	105632	18394
2003	$F < F_{pa}$		< 193000	< 175600	165000	107470	106257	9916
2004	$F < F_{pa}^*$		< 234000	< 211120	190000	103608	102746	7464
2005	F according to management plan*		< 150000	< 137000	145000	111970	113388	6558
2006	F according to management plan ($< F_{pa}$)*		< 135900	< 123300	123000	113354	111845	6909
2007	F according to management plan ($< F_{pa}$)*		< 136000	< 123800	123000	91778	92602	11828
2008	F according to management plan ($< F_{pa}$)*		< 150000	< 136500	136000	115414	115471	7378
2009	F according to management plan ($< F_{pa}$)*		< 139000	\leq 125900	126000	103883	105973	3774
2010	F according to management plan ($< F_{pa}$)*		< 118000	< 107100	107000	90755	96767	4071
2011	See scenarios			-	93000	89427	91528	3837

Year	Stock			Subarea 4 (North Sea) and Division 3.a (Skagerrak and Kattegat)				
	ICES advice	Total catch corresponding to advice	Landings corresponding to advice	Landings in Subarea 4 and Division 3.a calculated from the advice**	Agreed TAC	Official landings	ICES landings [#]	ICES discards ^{##}
2012 [^]	F according to management plan (< F _{pa}) [*]		< 87550	< 79320	79000	68241	70864	6396
2013	Management plan (TAC +15%) [*]		< 100684	< 91219	91220	71516	71406	6392
2014	Management plan (TAC-15%) [*]		< 85581	< 77536	77536	68695	69372	5824
2015	Management plan	< 80097		< 66006	66006	69796	69403	4603
2016	EU-Norway management strategy	≤ 75049		≤ 62153	65696	62658	62504	10693
2017	MSY approach	≤ 140653		≤ 122122	100287	83594	81570	6339
2018	MSY approach	≤ 118460		≤ 93980	105793	80531	81866	7004
2019	MSY approach	≤ 103327 [^]		≤ 87178	93614	87476	87649	4595
2020	MSY approach	≤ 88093		≤ 73092	79813	69739	69858	3152
2021	MSY approach	≤ 65687		≤ 55317	59512	46172 ^{^^}	46947	865
2022	MSY approach	≤ 49614		≤ 42259	44950	44815 ^{^^}	46147	4370
2023	MSY approach	≤ 58912		≤ 51320	53374			
2024	MSY approach	≤ 73815		≤ 63637				

* Single-stock boundary and the exploitation of this stock should be conducted in the context of mixed fisheries.

** Projected landings split according to the average in 1993–1998, as agreed by the relevant management authorities, i.e. 90.6% in Subarea 4 and Subdivision 3.a.20 and 9.4% in Subarea 6.

[#] Since 2016, landings include the Norwegian component of BMS landings.

^{##} Since 2016, discards include all BMS landings except the Norwegian component.

[^] Values corrected in February 2019.

^{^^} Official values are preliminary.

Table 6b Saithe in subareas 4 and 6 and in Division 3.a. **Subarea 6 (Rockall and West of Scotland)**. ICES advice, TAC, official landings, and ICES catch estimates (all ages). Weights are in tonnes. Values of official and ICES landings for the period 1987 to 2001 are presented to the nearest thousand tonnes in Subarea 4 and Division 3.a and to the nearest hundred tonnes in Subarea 6. TAC values are presented to the nearest thousand tonnes. Note that before 2000, the advice was provided for two separate areas: Subarea 4 and Division 3.a, and Subarea 6.

Year	Stock			Subarea 6 (Rockall and West of Scotland)				
	ICES advice	Total catch corresponding to advice	Landings corresponding to advice	Landings in Subarea 6 calculated from the advice**	Agreed TAC	Official landings	ICES landings [#]	ICES discards ^{##}
1987	Reduce F		19000		27800	32500	31400	
1988	60% of F (86); TAC		35000		35000	32800	34200	
1989	No increase in F; TAC		20000		30000	22400	25600	
1990	No increase in F; TAC		24000		29000	18000	19900	
1991	No increase in F; TAC		21000		22000	17900	17000	
1992	No increase in F; TAC		< 19000		17000	10800	11800	
1993	70% of F (91) ~ 93000 t		6300		14000	14500	13900	
1994	Reduce F by 30%				14000	13000	12800	
1995	No increase in F		-		16000	10600	11800	
1996	No increase in F		10200		13000	9400	9400	
1997	No increase in F				12000	8600	9400	
1998	Reduce F by 20%		4800		10900	7400	8400	
1999	Reduce F to F _{pa}		4800		7500	6800	7300	
2000	Reduce F by 30%		81000	6000	7000	6400	5900	
2001	Reduce F by 20%		96000	9000	9000	8700	8400	
2002	F < F _{pa}		< 148000	< 13000	14000	5600	5519	3150
2003	F < F _{pa}		< 193000	< 17400	17100	5220	5789	2242
2004	F < F _{pa} * [*]		< 234000	< 20880	20000	4810	4982	620
2005	F according to management plan*		< 150000	< 14000	15000	8700	6456	1637
2006	F according to management plan (< F _{pa})* [*]		< 135900	< 12200	13000	9420	9474	1675
2007	F according to management plan (< F _{pa})* [*]		< 136000	< 12200	13000	6690	6602	584
2008	F according to management plan (< F _{pa})* [*]		< 150000	< 13500	14000	6010	6712	981
2009	F according to management plan (< F _{pa})* [*]		< 139000	< 13100	13000	6170	6294	521
2010	F according to management plan (< F _{pa})* [*]		< 118000	< 11100	11000	6220	6263	412
2011	See scenarios			-	10000	7310	6917	502
2012 [^]	F according to management plan (< F _{pa})* [*]		< 87550	< 8230	8000	7560	7549	887

Year	Stock			Subarea 6 (Rockall and West of Scotland)				
	ICES advice	Total catch corresponding to advice	Landings corresponding to advice	Landings in Subarea 6 calculated from the advice**	Agreed TAC	Official landings	ICES landings [#]	ICES discards ^{##}
2013	Management plan (TAC +15%)*		< 100684	< 9464	9464	8470	8653	1397
2014	Management plan (TAC-15%)*		< 85581	< 8045	8045	6829	7020	512
2015	Management plan	< 80097		< 6848	6848	7577	7534	405
2016	EU-Norway management strategy	≤ 75049		≤ 6448	6816	5852	5573	181
2017	MSY approach	≤ 140653		≤ 12670	10404	7453	7116	139
2018	MSY approach	≤ 118460		≤ 9751	10215	7706	6641	322
2019	MSY approach	≤ 103327 [^]		≤ 9045	9713	4791	4875	59
2020	MSY approach	≤ 88093		≤ 7584	8280	4074	4081	32
2021	MSY approach	≤ 65687		≤ 5739	6175	3434 ^{^^}	3534	64
2022	MSY approach	≤ 49614		≤ 4385	4664	3450 ^{^^}	3533	33
2023	MSY approach	≤ 58912		≤ 5325	5538			
2024	MSY approach	≤ 73815		≤ 6602				

* Single-stock boundary and the exploitation of this stock should be conducted in the context of mixed fisheries.

** Projected landings split according to the average in 1993–1998, as agreed by the relevant management authorities, i.e. 90.6% in Subarea 4 and Subdivision 3.a.20 and 9.4% in Subarea 6.

§ Incomplete data.

§§ *Status quo* catch.

Since 2016, landings include the Norwegian component of BMS landings.

Since 2016, discards include all BMS landings except the Norwegian component.

[^] Values corrected in February 2019.

^{^^} Official values are preliminary.

History of the catch and landings

Table 7 Saithe in subareas 4 and 6 and in Division 3.a. Catch distribution by fleet in 2022 as estimated by ICES for ages 3–10+ only, as used in the assessment.

Catch	Landings*			Discards**
53805 tonnes	Bottom otter trawl 78%	Gillnet 9%	Other 13%	4247 tonnes
	49558 tonnes			

* Landings include the Norwegian component of BMS landings.

** Discards include BMS landings from EU and UK fleets.

Table 8 Saithe in subareas 4 and 6 and in Division 3.a. History of commercial landings; both the official and ICES estimated values (all ages) are presented by area for each country participating in the fishery. Weights are in tonnes and over all age groups.

Subarea 4 and Division 3.a

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Belgium	22	28	15	18	7	27	15	2	2	3	5	6
Denmark	7991	7498	7471	5443	8068	802	8018	6331	171	5695	4913	4512
Faroe Isl.	558	463	60	15	108	841	146	2	8	3	1	0
France	13628	11830	16953	15083	15881	7203	4582*	13856*	14093	8475	7910	11574
Germany	9589	12401	14397	12791	14140	13410	11193	10234	8052	9690	8602	7954
Greenlan	403	1042	924	564	888	927	0	0	0	0	0	0
Ireland	1	0	0	0	0	1	0	0	0	0	0	0
Lithuania	0	149	0	0	0	0	0	0	0	0	0	0
Netherla	3	40	28	5	3	16	3	24	34	168	43	75
Norway	62783	68122	61318	45396	61464	57708	52712	46809	33288	35701	37519	35631
Poland	0	1100	1084	1384	1407	988	654	584	0	0	0	0
Portugal	0	0	228	68	0	0	0	0	0	0	0	0
Russia	0	35	2	5	5	13	0	0	0	0	0	0
Sweden	2249	2132	1746	1381	1639	1363	1545	1335	1306	1402	1329	1156
UK	457	960	9128**	9625**	11804**	12584**	11887*	10250**	7287**	10379**	687	8888**
UK	5924	6170									7686	
Total reported	103608	111970	113354	91778	115414	103883	90755	89427	69241	71516	68695	69796
Unallocat	-862	1418	-1509	824	57	2090	6012	2101	1623	-110	677	-393
BMS												
ICES	102746	113388	111845	92602	115471	105973	96767	91528	70864	71406	69372	69403
TAC	190000	145000	123250	135900	135900	125934	10700	93600	79320	91220	77536	66006

Country	2016	2017	2018	2019	2020	2021*	2022*
Belgium	16	15	14	6	5	11	5
Denmark	4084	5690	7017	5275	3777	2947	2280
Faroe Isl.	18	16	4	14	28	0	0
France	10794	10334	12598	11361	9487	9146	9557
Germany	6279	7943	7952	7055	6858	4448	4280
Greenland	0	0	0	0	0	0	0
Ireland	0	0	0	<1	4*	0	1
Lithuania	0	0	0	0	3	0	0
Netherlands	112	191	267	178	181	140	51
Norway	31596	49580	38787	50306	39558	20442	20806
Poland	0	0	0	0	0	0	0
Portugal		0	0	0	0	0	0
Russia	0	0	0	0	0	0	0
Sweden	1198	1186	1316	1413	1181	1001	1087
UK (E/W/Ni)	8561**	8640**	12575**	11868**	8657**	8037**	6748**
UK (Scotland)							
Total reported	62658	83594	80531	87476	69739	46172	44815
Unallocated	-154	-2024	1335	173	119	775	1332
BMS landings		< 1	11	20	10	4	4
ICES estimate	62504#	81570#	81866#	87649#	69858#	46947#	46147#
TAC	65696	100287	105793	93614	79813	59512	44950

* Official values are preliminary.

** Scotland+E/W/Ni combined.

Since 2016, landings include the Norwegian component of BMS landings.

Subarea 6

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Denmark	0	0	0	0	0	0	0	0	0	0	20	0
Faroe Islands	34	25	76	32	23	60	24	5	6	25	29	3
France	053	3954	6092	4327	4170	2102	2008	2357	2612	3814	2904	3484
Germany	4	373	532	580	148	298	257	0	9	0	0	0
Ireland	95	168	267	322	288	407	520	359	364	313	128	105
Netherlands	0	0	3	36	1	0	0	0	0	0	0	6
Norway	16	20	28	377	78	68	121	240	5	715	442	677
Russia	6	25	7	2	50	4	2	0	0	0	9	1
Poland	0	0	0	0	0	0	0	0	0	0	0	0
Spain	2	3	6	3	4	8	18	31	13	21	9	15
Sweden	0	0	0	0	0	0	0	0	0	0	0	0
UK (E/W/Ni)	37	133	2748**	1424**	2955**	3491**	3168**	4500**	4549**	3646**	97	3286**
UK (Scotland)	1563	2922									3191	
Total	4810	7623	9759	7103	7717	6438	6118	7492	7558	8534	6829	7577
Unallocated	172	-1167	-285	-501	-1005	-144	145	-575	-9	119	191	-43
BMS landings												
ICES estimate	4982	6456	9474	6602	6712	6294	6263	6917	7549	8653	7020	7534
TAC	20000	15044	12787	14100	14100	13066	11000	9570	8230	9464	8045	6848

Country	2016	2017	2018	2019	2020	2021*	2022*
Denmark	0	5	1	7	0	0	0
Faroe Islands	7	13	21	7	3	2	0
France	2299	3968	3626	1336	1263	1316	1247
Germany	9	< 1	0	0	0	1	0
Ireland	185	171	231	109*	125*	72	133
Netherlands	12	3	100	4	< 1	3	0
Norway	555	633	955	478	1	0	0
Russia	0	2	0	2	0	0	0
Poland	0	0	0	0	0	1	0
Spain	15	4	7	24	15	38	21
Sweden	0	0	0	0	0	0	0
UK (E/W/Ni)	2770**	2652**	2764**	2824**	2666**	2001**	2049**
UK (Scotland)							
Total reported	5852	7453	7706	4791	4074	3434	3450
Unallocated	-279	-337	-1065	84	7	100	83
BMS landings		0	31	< 1	< 1	< 1	< 1
ICES estimate	5573#	7116#	6641#	4875#	4081#	3534#	3533#
TAC	6816	10404	10215	9713	8280	6175	4664

*Official values are preliminary.

**Scotland+E/W/Ni combined.

Does not include BMS landings.

Subareas 4 and 6 and Division 3.a

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ICES estimate#	107728	119844	121320	99204	122184	112267	103030	98446	78414	80059	76392	76936
TAC	210000	160044	136037	150000	150000	139000	118000	103170	87550	100684	85581	72854
	2016	2017	2018	2019	2020	2021	2022					
ICES estimate#	68077	88686	88507	92524	73938	50482	49680					
TAC	72512	110691	116008	103327	88093	65687	49614					

Since 2016, landings include Norwegian component of BMS landings.

Table 9 Saithe in subareas 4 and 6, and in Division 3.a. Landings from inside and outside the NEAFC Regulatory Area (RA; subdivision 27.6.b.1), as estimated by ICES and based on official landings reported by area by countries participating in the fishery, as well as total declared landings. Weights are in tonnes.

Year	Inside the NEAFC RA	Outside the NEAFC RA	Total landings	Percentage inside the NEAFC RA
2021*	2.3	49605	49607	< 1%
2022*	1.10	48264	48265	< 1%

* Official values are preliminary.

Summary of the assessment

Table 10 Saithe in subareas 4 and 6, and in Division 3.a. Assessment summary. Recruitments are in thousands, weights in tonnes. High and Low refer to 95% confidence intervals.

Year	Recruitment (Age 3)			Spawning-stock biomass			Landings ^{^,*}	Discards ^{^,**}	Fishing Pressure (ages 4–7)		
	Low	R	High	Low	SSB	High			Low	F	High
	thousands			tonnes			tonnes				
1967	101977	141932	197540	121574	152710	191821	88339	12992	0.276	0.353	0.452
1968	117392	161043	220926	170740	211426	261806	113741	20818	0.229	0.290	0.369
1969	209460	287190	393767	227686	278400	340409	130580	19713	0.257	0.319	0.396
1970	215891	294247	401042	289084	348015	418959	235012	35817	0.280	0.344	0.423
1971	264056	356661	481743	386326	463751	556694	265356	43821	0.305	0.372	0.453
1972	166412	223340	299744	413068	492694	587669	261914	34567	0.333	0.403	0.488
1973	149637	200584	268877	440375	525087	626096	242513	32651	0.354	0.427	0.514
1974	148180	198796	266701	488586	580026	688578	298347	38674	0.416	0.496	0.591
1975	175404	234361	313135	435989	518857	617477	271610	33035	0.450	0.535	0.636
1976	302249	409751	555489	333999	399842	478665	343898	79449	0.508	0.604	0.717
1977	110740	148929	200287	271371	325233	389786	216393	23520	0.496	0.596	0.716
1978	89757	120436	161601	246869	297081	357506	155124	21727	0.400	0.480	0.576
1979	64902	87362	117594	234474	278998	331975	128352	14295	0.375	0.450	0.539
1980	63399	85357	114920	221147	261080	308224	131897	13392	0.397	0.473	0.565
1981	121326	164372	222690	212157	249294	292931	132273	15971	0.392	0.468	0.559
1982	105108	140969	189066	190048	220375	255541	174336	27775	0.458	0.540	0.636
1983	110440	148195	198858	189599	220397	256199	180040	22978	0.557	0.655	0.770
1984	190665	256251	344398	162905	188654	218474	200843	39723	0.580	0.679	0.795
1985	264151	358100	485464	144015	165976	191287	220870	52802	0.603	0.705	0.823
1986	216772	291263	391352	136178	156610	180107	198605	34190	0.630	0.741	0.873
1987	110813	148792	199788	143500	165095	189939	167503	24877	0.603	0.706	0.827
1988	103520	138564	185472	132999	154595	179697	135176	19076	0.609	0.713	0.834
1989	76050	101903	136544	109131	126484	146597	108892	15707	0.590	0.691	0.811
1990	112330	150734	202268	98802	114769	133315	103831	20619	0.560	0.658	0.772
1991	131704	176077	235399	93171	107637	124349	108071	22902	0.535	0.628	0.738
1992	77608	103172	137158	98594	113163	129885	99745	15792	0.518	0.611	0.721
1993	132816	176956	235766	103606	119733	138369	111499	21119	0.547	0.646	0.764
1994	89660	119188	158440	107049	123497	142472	109621	17138	0.486	0.574	0.678
1995	161856	217635	292637	123095	142655	165323	121795	19395	0.491	0.583	0.692
1996	89562	120292	161567	133230	154059	178145	114968	13928	0.430	0.513	0.610
1997	113689	153448	207112	164895	194025	228301	107348	12755	0.367	0.439	0.525
1998	65788	88673	119519	164362	192245	224860	106126	11096	0.372	0.444	0.529
1999	89649	121015	163357	171789	201133	235489	110531	8936	0.395	0.472	0.565
2000	76205	102867	138858	167901	194748	225888	85781	8014	0.333	0.400	0.481
2001	157718	211740	284265	173806	201287	233113	91741	11118	0.312	0.376	0.452
2002	113294	152360	204897	194267	222834	255601	110911	18936	0.349	0.418	0.500
2003	115075	154982	208729	181059	208600	240331	110282	11374	0.366	0.438	0.526
2004	84827	113676	152338	220516	255179	295290	107356	6436	0.313	0.377	0.454

Year	Recruitment (Age 3)			Spawning-stock biomass			Landings ^{^,*}	Discards ^{^,**}	Fishing Pressure (ages 4–7)		
	Low	R	High	Low	SSB	High			Low	F	High
	thousands			tonnes					tonnes		
2005	107931	145470	196066	213626	246304	283982	118625	2592	0.317	0.380	0.455
2006	71596	97945	133991	228140	262816	302762	120414	8297	0.333	0.398	0.476
2007	113038	154419	210950	212095	244963	282924	94958	11375	0.321	0.384	0.459
2008	53336	71445	95703	212664	245602	283642	121618	8269	0.378	0.449	0.533
2009	40994	54884	73481	205524	238520	276813	110972	3548	0.395	0.470	0.560
2010	66366	89024	119418	188614	220711	258271	102128	2595	0.381	0.454	0.540
2011	59730	80817	109349	151737	177346	207278	98034	3972	0.379	0.451	0.536
2012	99274	133005	178198	140843	164320	191710	78144	8905	0.351	0.419	0.500
2013	67624	90693	121633	145545	169312	196959	79859	7412	0.323	0.387	0.463
2014	41318	55748	75217	162349	188223	218221	76057	6115	0.309	0.370	0.444
2015	68292	92314	124787	167204	193592	224146	76748	4697	0.310	0.371	0.445
2016	84553	114113	154008	154630	179140	207535	67620	10052	0.311	0.373	0.447
2017	58671	79451	107589	172267	198702	229192	88010	6572	0.341	0.409	0.489
2018	30657	41631	56534	169033	195062	225100	88328	7118	0.365	0.438	0.526
2019	37905	51309	69452	160246	186286	216558	92390	4244	0.391	0.472	0.570
2020	24379	33879	47081	139453	164125	193161	73791	3029	0.338	0.410	0.496
2021	38224	56154	82494	121795	145457	173715	50124	827	0.280	0.346	0.428
2022	41467	70476	119777	122771	149131	181150	49558	4247	0.252	0.327	0.423
2023		64320***		123746	161204	207827					

[^] ICES estimates; landings, and discards for ages 3–10+ only, as used in the assessment.

* Since 2016, landings include the Norwegian component of BMS landings.

** Since 2016, discards include BMS landings from EU and UK fleets.

*** Recruitment in 2023 is the geometric mean of resampled recruitment estimates from 2013 to 2022.

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