

Anglerfish (*Lophius budegassa*, *Lophius piscatorius*) 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 should be no more than 9 881 tonnes in each of the years 2023 and 2024.

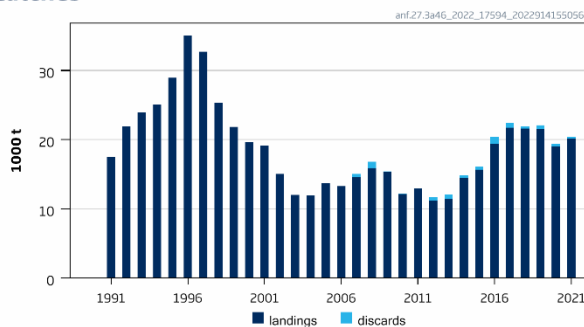
ICES notes the existence of a precautionary management plan, developed and adopted by one of the relevant management authorities for this stock.

Management should be implemented at the stock level.

Stock development over time

The fishing pressure proxy on the stock is above F_{MSY} proxy (Figure 2), and the stock-size index is above MSY Btrigger proxy (ltrigger).

Catches



Stock size indicator

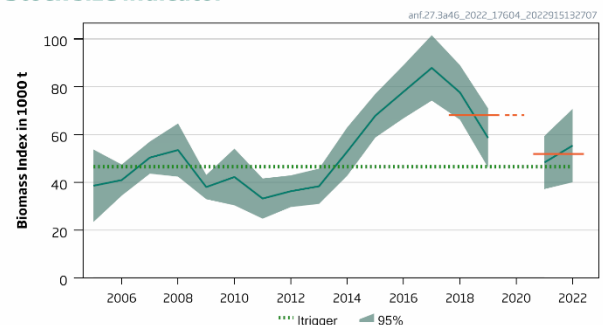


Figure 1 Anglerfish in subareas 4 and 6, and in Division 3.a. Summary of the stock assessment. ICES landings and discards (estimates available since 2007). Stock biomass from the SIAMISS-Q2 survey. The horizontal orange lines indicate the average of the most recent two years, and the previous three years (with 2020 not available and therefore excluded from the average).

Catch scenarios

ICES framework for category 3 stocks was applied (rfb rule, method 2.1; ICES, 2022a). A survey biomass index was used as an indicator of stock development. The advice is based on the recent advised catches (2022), multiplied by the ratio of the mean of the last two index values (index A) and the mean of the three preceding values (index B), a ratio of observed mean length in the catch relative to the target mean length, a biomass safeguard, and a precautionary multiplier. The stability clause was considered and applied to limit the reduction in catch advice to 30%. The discard rate (average 2007–2021) was 2.9%.

Table 1 Anglerfish in subareas 4 and 6, and in Division 3.a. The basis for the catch scenarios. All weights are in tonnes. *

Division 3a46 Anglerfish stock		
Previous catch advice A_y (advised catch for 2022)	14 116 tonnes	
Stock biomass trend		
Index A (2021, 2022)	53 222 tonnes	
Index B (2018, 2019; 2020 not available)	68 118 tonnes	
r: stock biomass trend (index ratio A/B)	0.78	
Fishing pressure proxy		
Mean catch length ($L_{\text{mean}} = L_{2021}$)	53 cm	
MSY proxy length ($L_F = M$)	61 cm	
f: Fishing pressure proxy relative to MSY proxy ($L_{2021}/L_F = M$)	0.87	
Biomass safeguard		
Last index value (I_{2021})	55 423	
Index trigger value ($I_{\text{trigger}} = I_{\text{loss}} \times 1.4$)	46 554	
b: Index relative to trigger value, $\min \{I_{2021}/I_{\text{trigger}}, 1\}$	1	
Precautionary multiplier to maintain biomass above B_{lim} with 95% probability		
m: multiplier (generic multiplier based on life history)	0.95	
RFB calculation **	9 100 tonnes	
Stability clause (+20%/-30% compared to A_y , only applied if $b = 1$)	Applied	0.70
Discard rate	1.2%	
Catch advice for 2023 ($A_y \times$ stability clause)	9 881 tonnes	
Projected landings corresponding to advice ***	9 610 tonnes	
% advice change ^	-30%	

* The figures in the table are rounded. Calculations were made with unrounded inputs, and computed values may not match exactly when calculated using the rounded figures in the table.

** $A_{y+1} = A_y \times r \times f \times b \times m$.

*** $[\text{Advised catch for 2023}] \times [1 - \text{discard rate}]$.

^ Advice value for 2023 relative to the advice value for 2022 (14 116 tonnes).

The current advice has decreased by 30% compared to last year's advice because of a change in the advice method and a declining trend in the recent stock biomass.

Length indicator

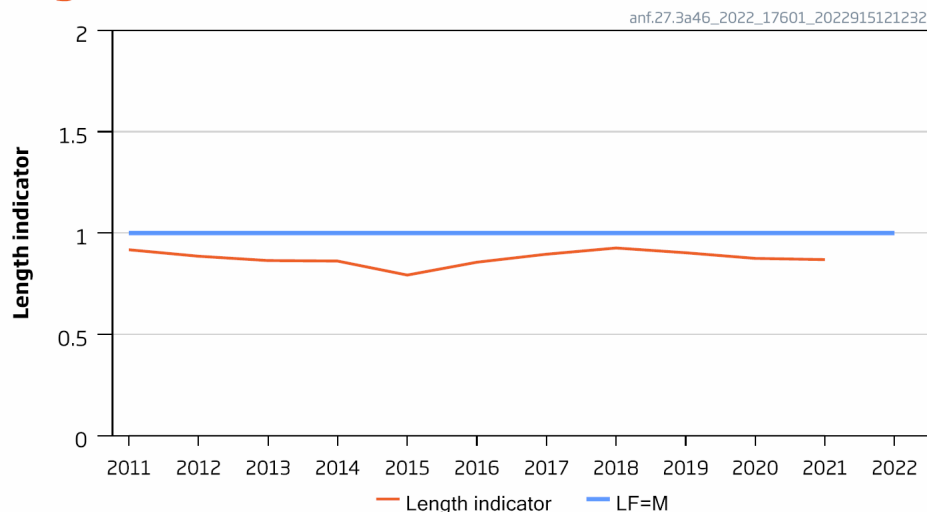


Figure 2 Anglerfish in subareas 4 and 6 and in Division 3.a. Length indicator (mean length of fish in the catch above the estimated length of first capture (L_c) normalised to the MSY proxy reference length $L_F = M$). The exploitation status is below $F_{\text{MSY proxy}}$ when the indicator ratio value is higher than 1 (shown by a blue line).

Basis of the advice

Table 2 Anglerfish 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). The MAP stipulates that when the F_{MSY} ranges are not available, fishing opportunities should be based on the best available scientific advice. There is no agreed shared management plan with the UK or Norway for this stock, and ICES provides advice according to ICES MSY approach.

Quality of the assessment

The SIAMISS-Q2 survey was not completed in 2020 due to the COVID-19 pandemic; the stock-size indicator is therefore unknown for 2020. The use of two values (2018, 2019; no data for 2020) for index B in the category 3 approach adds a degree of uncertainty. Furthermore, in 2022 the SIAMISS-Q2 survey did not include Division 6.b (Rockall) which in 2021 accounted for 7.9% of landings. The survey estimate for 2021 was used in place of the missing 2022 estimate for Division 6.b. This adds a further degree of uncertainty to the assessment, but does not affect the advice as the reduction is capped.

The SIAMISS-Q2 survey does not cover divisions 3.a, 4.b, or 4.c, which collectively accounted for 10.2% of the landings in 2021. It is uncertain to what extent the lack of coverage of these areas affects the quality of the assessment.

Discard data are available for most of the fleets except the gillnet fishery, which is not adequately sampled and which accounted for 13% of the landings in 2021.

Issues relevant to the advice

Previously, advice for this stock was given following ICES precautionary approach; the new method gives advice following ICES MSY approach (ICES, 2022a).

The basis for the advice (rfb rule) has a biennial advice interval and so advice is provided for 2 years (ICES, 2022a).

There is a mismatch between management and assessment area, and as a result there is a potential for catches to exceed advice.

Reference points

Table 3 Anglerfish in subareas 4 and 6 and in Division 3.a. Reference points, relative values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$ proxy	46 554	Biomass index trigger value ($I_{trigger}$), defined as $I_{trigger} = I_{loss} \times 1.4$, where I_{loss} is the lowest observed historical biomass index value (from 2011) from 2005–2022. Value in tonnes.	ICES (2022a, 2022b)
	F_{MSY} proxy	1	$L_{mean}/L_F = M$; Mean catch length divided by MSY proxy reference length ($L_F = M = 61$ cm).	ICES (2022a, 2022b)
Precautionary approach	B_{lim}	Not defined		
	B_{pa}	Not defined		
	F_{lim}	Not defined		
	F_{pa}	Not defined		
Management plan	SSB_{mgt}	Not applicable		
	F_{mgt}	Not applicable		

Basis of the assessment

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

ICES stock data category	3 (ICES, 2022c)
Assessment type	Survey biomass trend applying the rfb rule for advice (ICES, 2022a).
Input data	Commercial catch (international landings and discards, length frequencies from catch sampling), and a dedicated Scottish–Irish Anglerfish and Megrin Industry–Science Survey in Subarea 6 and Division 4.a (G3745 - Anglerfish surveys II–III [SIAMISS-Q2])
Discards and bycatch	Discard estimates are available from 2007 onwards for the majority of the fleets included in the model and in the advice.
Indicators	Length distribution from the SIAMISS–Q2 survey
Other information	Last benchmarked in 2018 (WKANGLER; ICES, 2018a).
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

History of the advice, catch, and management

Table 5 Anglerfish in subareas 4 and 6, and in Division 3.a. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Catch corresponding to advice		Landings corresponding to advice	Agreed TAC *	Official landings	ICES landings #	ICES discards
		Division 3.a and Subarea 4	Subarea 6					
1990	Not assessed	-	-	-	8 600	17 605	-	-
1991	Not assessed	-	-	-	8 600	18 369	17 441	-
1992	Not assessed	-	-	-	8 600	20 807	21 872	-
1993	No long-term gain in increased F **	-	-	-	8 600	22 596	23 971	-
1994	No long-term gain in increased F **	-	-	-	8 600	25 155	25 057	-
1995	A precautionary TAC not exceeding recent catch levels**	-	-	-	8 600	29 055	28 913	-
1996	A precautionary TAC not exceeding recent catch levels**	-	-	-	8 600	35 039	35 100	-
1997	Reduction in fishing effort**	-	-	-	8 600	32 853	32 728	-
1998	Reduction in fishing effort**	-	-	-	30 700	25 471	25 293	-
1999	Reduce fishing effort, effective implementation of the TAC**	-	-	-	30 700	21 230	21 854	-
2000	40% reduction in catches	< 9700	< 7400	-	25 700	18 973	19 682	-
2001	2/3 of the catches in 1973–1990	5700	4300	-	20 500	19 304	19 157	-
2002	2/3 of the catches in 1973–1990	5700	4300	-	15 300	15 978	15 067	-
2003	Reduce F below F_{pa}	-	-	< 6700***	10 200	13 004	12 008	-
2004	Reduce F below F_{pa}	-	-	< 8800	10 200	13 496	11 976	-
2005	No effort increase	-	-	-	15 000	13 557	13 728	-
2006	No effort increase	-	-	-	15 000	15 152	13 292	-
2007	No effort increase	-	-	-	16 500	16 430	14 564	490
2008	No effort increase	-	-	-	16 500	16 918	15 878	903
2009	Same advice as last year	-	-	-	16 900	16 008	15 372	38
2010	No effort increase	-	-	-	16 900	13 898	12 136	69
2011	Decrease effort	-	-	-	15 100^	13 679	12 902	95
2012	Reduce catch	-	-	-	14 344^	12 266	11 143	590
2013	Decrease catches by 20%	-	-	-	13 627^	12 141	11 375	687
2014	Decrease catches by 20%	-	-	10231	12 265^	13 286	14 406	448
2015	Increase landings by 20%	-	-	14 702	16 203^	16 182	15 663	395
2016	Precautionary approach (increase recent advised catch by no more than 20%)	≤ 18 435		17 642	19 142^	19 533	19 412	981
2017	Precautionary approach	≤ 22 007		21 171	21 171^	22 023	21 719	756
2018	Precautionary approach	≤ 26 408		≤ 25 563	25 405^^	21 487	21 572	326
2019	Precautionary approach	≤ 31 690			31 690^^	21 192	21 179	513

Year	ICES advice	Catch corresponding to advice		Landings corresponding to advice	Agreed TAC *	Official landings	ICES landings #	ICES discards
		Division 3.a and Subarea 4	Subarea 6					
2020	Precautionary approach	≤ 22 056			22 056^^	19 063##	19 072	316
2021	Precautionary approach	≤ 17 645			18 349^^^	20 066##	20 143	249
2022	Precautionary approach	≤ 14 116			14 116^^^			
2023	MSY approach	≤ 9 881						
2024	MSY approach	≤ 9 881						

* TAC for Subarea 4 and Division 2.a (EC until 2020; UK thereafter) plus TAC for Division 5.b (EC) and subareas 6, 12, and 14. Prior to 1998, TAC covered only Division 5.b (EC) and subareas 6, 12, and 14.

** For Subarea 6.

*** Advice for Division 3.a, Subarea 4, and Division 6.a.

^ An additional quota of 1500 tonnes is also available for EU vessels fishing in the Norwegian zone of Subarea 4.

^^ An additional quota of 1700 tonnes is also available for EU vessels fishing in the Norwegian zone of Subarea 4.

^^^ An additional quota of 1000 tonnes is also available for EU vessels fishing in the Norwegian zone of Subarea 4.

Includes Division 3.a official landings when ICES estimates are not available.

Preliminary.

History of the catch and landings

Table 6 Anglerfish in subareas 4 and 6 and in Division 3.a. Catch distribution by fleet in 2021 as estimated by ICES.

Catch	Landings								Discards
	Division 3.a and Subarea 4				Subarea 6				
20 392 tonnes	Demersal trawls 68%	Gillnets 21%	Norway lobster trawls 6%	Other 5%	Demersal trawls 87%	Gillnets 1%	Norway lobster trawls 11%	Other 1%	249 tonnes
	20 143 tonnes								

Table 7 Anglerfish in subareas 4 and 6 and in Division 3.a. Official landings by ICES area, and ICES estimates of landings and discards. All weights are in tonnes.

Year	3.a	4.a	4.b	4.c	6.a	6.b	4	6	Total (3.a, 4, and 6)	ICES landings**	ICES discards
1973	140	2 085	575	41	9 221	127	2 701	9 348	12 189	-	-
1974	202	2 737	1 171	39	3 217	435	3 947	3 652	7 801	-	-
1975	291	2 887	1 864	59	3 122	76	4 810	3 198	8 299	-	-
1976	641	3 624	1 252	49	3 383	72	4 925	3 455	9 021	-	-
1977	643	3 264	1 278	54	3 457	78	4 596	3 535	8 774	-	-
1978	509	3 111	1 260	72	3 117	103	4 443	3 220	8 172	-	-
1979	687	2 972	1 578	112	2 745	29	4 662	2 774	8 123	-	-
1980	652	3 450	1 374	175	2 634	200	4 999	2 834	8 485	-	-
1981	549	2 472	752	132	1 387	331	3 356	1 718	5 623	-	-
1982	529	2 214	654	99	3 154	454	2 967	3 608	7 104	-	-
1983	506	2 465	1 540	181	3 417	433	4 186	3 850	8 542	-	-
1984	568	3 874	1 803	188	3 935	707	5 865	4 642	11 075	-	-
1985	578	4 569	1 798	77	4 043	1 013	6 444	5 056	12 078	-	-
1986	524	5 594	1 762	47	3 090	1 326	7 403	4 416	12 343	-	-
1987	589	7 705	1 768	66	3 955	1 294	9 539	5 249	15 377	-	-
1988	347	7 737	2 061	95	6 003	1 730	9 893	7 733	17 973	-	-
1989	334	7 868	2 121	86	5 729	313	10 075	6 042	16 451	-	-
1990	570	8 387	2 177	34	5 615	822	10 598	6 437	17 605	-	-
1991	595	9 235	2 522	26	5 061	923	11 790	5 984	18 369	17 441	-
1992	938	10 209	3 053	39	5 479	1 089	13 301	6 568	20 807	21 872	-
1993	843	12 309	3 143	66	5 553	681	15 519	6 234	22 596	23 971	-
1994	811	14 505	3 445	210	5 273	909	18 162	6 182	25 155	25 057	-

Year	3.a	4.a	4.b	4.c	6.a	6.b	4	6	Total (3.a, 4, and 6)	ICES landings**	ICES discards
1995	823	17 891	2 627	402	6 354	958	20 920	7 312	29 055	28 913	-
1996	702	25 176	1 847	304	6 408	602	27 327	7 010	35 039	35 100	-
1997	776	23 425	2 172	160	5 330	990	25 757	6 320	32 853	32 728	-
1998	626	16 859	2 088	78	4 506	1 313	19 026	5 819	25 471	25 293	-
1999	660	13 344	1 517	24	4 284	1 401	14 885	5 685	21 230	21 854	-
2000	602	12 338	1 617	31	3 311	1 074	13 986	4 385	18 973	19 682	-
2001	621	12 861	1 832	21	2 660	1 309	14 714	3 969	19 304	19 157	-
2002	667	11 048	1 244	21	2 280	718	12 313	2 998	15 978	15 067	-
2003	478	8 523	847	20	2 493	643	9 390	3 136	13 004	12 008	-
2004	519	8 987	851	15	2 453	671	9 853	3 124	13 496	11 976	-
2005	458	8 424	688	5	3 019	958	9 117	3 982	13 557	13 728	-
2006	426	10 340	683	3	2 785	915	11 026	3 700	15 152	13 292	-
2007	433	10 632	749	4	3 353	1 261	11 384	4 613	16 430	14 564	490
2008	486	11 038	769	5	3 373	1 246	11 813	4 619	16 918	15 878	903
2009	478	10 067	651	8	2 984	1 820	10 726	4 804	16 008	15 372	38
2010	433	8 190	615	11	3 040	1 606	8 815	4 645	13 893	12 136	69
2011	405	7 760	764	8	2 871	1 871	8 532	4 742	13 679	12 902	95
2012	423	6 459	714	5	2 835	1 831	7 177	4 666	12 266	11 143	590
2013	407	6 393	546	5	2 667	2 123	6 944	4 790	12 141	11 375	687
2014	440	7 633	820	27	2 610	1 754	8 481	4 365	13 286	14 406	448
2015	478	9 690	985	16	3 290	1 723	10 691	5 013	16 182	15 663	395
2016	586	11 690	1 196	11	4 638	1 423	12 887	6 080	19 553	19 412	981
2017	742	13 620	1 107	7	5 024	1 504	14 753	6 528	22 023	21 719	756
2018	914	13 391	823	11	4 292	1 918	14 225	6 210	21 349	21 572	326
2019	1 029	11 155	1 303	28	5 030	2 647	12 486	7 677	21 192	21 179	513
2020*	866	10 674	1 066	24	4 749	1 685	11 763	6 434	19 063	19 072	316
2021*	912	11 959	1 184	19	4 455	1 537	13 162	5 992	20 066	20 143	249

* Preliminary official landings.

** Revised values to include Division 3.a official landings when ICES estimates are not available (ICES, 2022b).

Table 8 Anglerfish in subareas 4 and 6 and in Division 3.a. Official landings by country and ICES estimated landings in Subarea 6. All weights are in tonnes.

Year	Belgium	Denmark	Faroe Is.	France	Germany	Ireland	Netherlands	Norway	Portugal	Russia	Spain	UK (E,W,&NI)	UK (Scotland)	UK (total)	Total	Unallocated	ICES landings
1991	3	1	-	1 910	1	522	-	24	-	-	340	369	2 814	-	5 984	296	6 280
1992	2	3	2	2 308	2	820	-	24	-	-	274	524	2 609	-	6 568	2 638	9 206
1993	9	4	-	2 496	163	524	-	25	-	-	186	299	2 528	-	6 234	3 816	10 050
1994	6	5	-	2 382	140	438	-	30	132	-	215	420	2 414	-	6 182	2 634	8 816
1995	5	10	-	2 648	160	853	-	18	128	-	333	425	2 732	-	7 312	4 984	12 296
1996	-	4	15	2 899	113	807	-	15	-	-	229	345	2 583	-	7 010	11 148	18 158
1997	5	1	4	2 059	249	764	27	5	91	-	234	403	2 478	-	6 320	7 415	13 735
1998	2	2	2	1 635	269	879	1	9	413	-	338	307	1 962	-	5 819	4 821	10 640
1999	-	1	2	1 814	194	692	-	6	429	-	344	171	2 032	-	5 685	3 790	9 475
2000	-	<1	-	1 180	158	596	-	14	20	-	231	316	1 870	-	4 385	3 131	7 516
2001	<1	<1	1	1 135	78	609	-	7	18	1	397	237	1 486	-	3 969	1 890	5 859
2002	<1	-	-	782	38	355	-	4	8	-	229	165	1 417	-	2 998	-22	2 976
2003	-	<1	-	1 403	91	348	-	6	4	-	255	164	865	-	3 136	-68	3 068
2004	<1	<1	2	1 366	105	232	-	5	19	2	153	84	1 156	-	3 124	6	3 130
2005	-	-	2	1 689	116	391	-	5	63	4	117	113	1 482	-	3 982	-235	3 747
2006	-	-	3	1 537	73	445	-	7	-	1	112	70	1 451	-	3 700	-209	3 491

Year	Belgium	Denmark	Faroe Is.	France	Germany	Ireland	Netherlands	Norway	Portugal	Russia	Spain	UK (E,W,&NI)	UK (Scotland)	UK (total)	Total	Unallocated	ICES landings
2007	-	-	2	2 090	222	540	-	8	-	1	15	188	1 546	-	4 613	-137	4 476
2008	-	-	2	2 073	146	371	-	7	-	35	259	6	1 720	-	4 619	228	4 847
2009	-	-	6	1 852	211	419	-	9	-	-	242	60	2 005	-	4 804	388	5 192
2010	-	-	12	1 374	166	617	-	14	-	-	229	-	-	2234	4 645	-733	3 912
2011	-	-	1	1 676	149	596	-	7	-	-	167	-	-	2145	4 742	-49	4 693
2012	-	-	5	1 622	142	581	-	6	-	-	105	132	2 073	2205	4 666	-294	4 372
2013	-	-	-	1 777	136	572	-	10	-	-	123	401	1 770	2171	4 790	-63	4 727
2014	-	-	1	1 246	151	572	-	4	-	1	81	-	-	2310	4 365	1 515	5 880
2015	-	-	<1	1 326	201	602	-	8	-	2	149	-	-	2724	5 013	-5	5 008
2016	-	-	1	1 734	258	741	-	12	-	-	234	-	-	3080	6 060	-94	5 966
2017	-	-	<1	1 882	246	793	-	5	-	2	290	-	-	3310	6 528	-68	6 460
2018	-	-	-	1 287	394	878	-	4	-	-	261	-	-	3387	6 211	145	6 356
2019	-	-	-	1 293	434	126	-	2	-	1	358	-	-	4322	7 652	160	7 812
2020*	-	-	-	1 304	229	900	-	1	-	3	264	-	-	3731	6 432	169	6 601
2021*	-	1	-	1 326	157	684	-	-	-	-	282	-	-	3539	5 992	40	6 032

* Preliminary official landings.

Table 9 Anglerfish in subareas 4 and 6 and in Division 3.a. Official landings by country and ICES estimated landings in Subarea 4. All weights are in tonnes.

Year	Belgium	Denmark	Faroes	France	Germany	Ireland	Netherlands	Norway	Sweden	UK (E,W,&NI)	UK (Scotland)	UK (Total)	Total	Unallocated	ICES landings
1991	372	1 599	1	124	75	-	313	604	14	804	7 884	-	11 790	-1 224	10 566
1992	559	1 686	-	152	70	-	410	639	7	1 158	8 620	-	13 301	-1 573	11 728
1993	595	1 293	12	69	113	-	559	1 227	7	1 463	10 181	-	15 519	-2 441	13 078
1994	753	1 509	18	30	99	-	568	1 329	10	1 582	12 264	-	18 162	-2 732	15 430
1995	607	1 027	20	18	623	-	363	672	4	1 456	16 130	-	20 920	-5 126	15 794
1996	323	1 464	-	7	301	-	201	850	2	1 357	22 822	-	27 327	-11 087	16 240
1997	357	1 489	15	7	619	-	260	678	5	2 969	19 358	-	25 757	-7 540	18 217
1998	389	1 456	10	13	892	-	238	967	11	1 307	13 743	-	19 026	-4 999	14 027
1999	286	1 496	6	18	463	-	166	1 236	12	1 148	10 054	-	14 885	-3 166	11 719
2000	476	1 347	-	8	196	-	168	1 191	81	642	9 877	-	13 986	-2 422	11 564
2001	594	1 540	2	9	104	-	132	1 227	46	658	10 402	-	14 714	-2 037	12 677
2002	459	1 563	10	8	112	-	75	938	65	334	8 749	-	12 313	-600	11 713
2003	190	1 714	3	8	76	1	52	781	10	281	6 274	-	9 390	-676	8 714
2004	265	1 812	11	8	31	-	63	1 021	7	206	6 429	-	9 853	-1 330	8 523
2005	211	1 616	22	4	93	-	45	896	9	130	6 091	-	9 117	579	9 696
2006	141	1 587	2	7	187	-	47	1 018	10	207	7 820	-	11 026	-1 462	9 564
2007	181	1 134	-	14	198	-	76	855	26	425	8 476	-	11 384	-1 561	9 823
2008	185	1 308	-	13	367	-	71	875	76	118	8 800	-	11 813	-1 081	10 732
2009	140	1 382	4	23	233	-	41	881	-	406	7 617	-	10 726	-945	9 781
2010	131	1 337	-	30	145	-	56	802	-	460	5 855	-	8 815	-915	7 900
2011	116	1 127	-	24	63	-	59	505	-	-	-	6	8 532	-612	7 920
2012	133	1 122	-	15	275	-	67	496	-	333	4 736	5	7 177	-765	6 412
2013	137	1 046	-	15	284	-	42	572	-	621	4 226	4	6 944	-638	6 306
2014	217	1 135	-	30	339	-	108	533	-	-	-	6	8 481	-316	8 165
2015	200	1 331	-	26	309	-	98	415	10	-	-	8	10 691	-448	10 243
2016	253	2 090	-	36	226	-	148	626	11	-	-	9	12 887	-33	12 854
2017	169	2 567	-	91	537	-	199	881	18	-	-	10	14 733	-225	14 508
2018	156	2 201	-	142	536	-	187	1 267	25	-	-	9	14 225	55	14 280
2019	249	2 202	-	186	574	-	405	1 289	36	-	-	7	12 486	176	12 662

Year	Belgium	Denmark	Faroes	France	Germany	Ireland	Netherlands	Norway	Sweden	UK (E,W,&NI)	UK (Scotland)	UK (Total)	Total	Unallocated	ICES landings
2020	243	1 398	-	127	361	-	285	997	72	-	-	8	11 765	-181	11 582
2021	290	1462	-	108	228	-	376	982	11	-	-	9604	13162	6	13168

* Preliminary official landings.

Table 10 Anglerfish in subareas 4 and 6 and in Division 3.a. Official landings by country in Division 3.a. All weights are in tonnes.

Year	Belgium	Denmark	France	Germany	Netherlands	Norway	Sweden	UK (Total)	Total	Unallocated	ICES landings
1991	15	493	-	-	-	64	23	-	595	-	-
1992	48	658	-	-	-	170	62	-	938	-	-
1993	34	565	-	1	-	154	89	-	843	-	-
1994	21	459	-	<1	-	263	68	-	811	-	-
1995	35	312	-	-	-	440	36	-	823	-	-
1996	-	367	-	1	-	309	25	-	702	-	-
1997	-	550	-	1	-	186	39	-	776	-	-
1998	-	415	-	1	-	177	33	-	626	-	-
1999	-	362	-	2	-	260	36	-	660	-	-
2000	-	377	-	1	-	197	27	-	602	-	-
2001	-	375	-	-	-	200	46	-	621	-	-
2002	-	369	-	1	-	242	55	-	667	288	379
2003	-	215	-	-	3	189	71	-	478	252	226
2004	-	311	-	1	4	130	73	-	519	197	322
2005	-	274	-	1	4	100	79	-	458	174	284
2006	-	227	-	2	3	139	54	-	426	189	237
2007	-	255	-	1	1	132	44	-	433	168	265
2008	-	287	-	1	3	144	51	-	486	187	299
2009	-	344	-	1	-	134	-	-	478	79	399
2010	-	270	-	1	5	158	-	-	433	109	324
2011	-	251	-	2	-	153	-	-	405	116	289
2012	-	307	<1	1	-	115	-	-	423	63	360
2013	-	298	<1	1	-	108	-	-	407	65	342
2014	-	309	-	-	4	127	-	-	440	78	362
2015	-	336	-	1	9	90	42	-	478	66	412
2016	-	389	<1	2	17	124	53	<1	586	-5	591
2017	-	526	1	1	16	118	81	-	742	-9	751
2018	-	597	-	2	16	204	95	-	914	-22	936
2019	-	692	-	1	46	189	100	-	1028	-35	1 063
2020*	-	600	-	1	66	129	71	0	866	-22	888
2021*	-	678	-	1	46	116	71	-	912	-30	942

* Preliminary official landings.

Summary of the assessment

Table 11 Anglerfish in subareas 4 and 6, and in Division 3.a. Assessment summary. Weights are in tonnes. High and low refer to 95% confidence intervals.

Year	Stock-size indicator			ICES landings *	ICES discards	Length indicator **
	Low	Value	High			
1991				17 441		
1992				21 872		
1993				23 971		
1994				25 057		
1995				28 913		
1996				35 100		
1997				32 728		
1998				25 293		
1999				21 854		
2000				19 682		
2001				19 157		
2002				15 067		
2003				12 008		
2004				11 976		
2005	23 479	38 617	53 755	13 728		
2006	34 478	40 985	47 492	13 292		
2007	43 676	50 392	57 108	14 564	490	
2008	42 421	53 546	64 671	15 878	903	
2009	32 987	38 060	43 133	15 372	38	
2010	30 429	42 279	54 129	12 136	69	0.840
2011	24 846	33 254	41 662	12 902	95	0.918
2012	29 704	36 325	42 946	11 143	590	0.886
2013	31 020	38 395	45 770	11 375	687	0.865
2014	42 769	52 884	62 999	14 406	448	0.862
2015	58 782	67 915	77 047	15 663	395	0.793
2016	66 831	77 946	89 060	19 412	981	0.856
2017	74 222	87 896	101 569	21 719	756	0.896
2018	66 258	77 661	89 064	21 572	326	0.926
2019	46 189	58 575	70 962	21 551	513	0.903
2020				19 072	316	0.875
2021	37 233	48 354	59 476	20 143	249	0.869
2022	40 068	55 423	70 779			

* Includes Division 3.a official landings when ICES estimates are not available.

** Mean length of fish in the catch above the estimated length of first capture (L_c) normalised to the MSY proxy reference length $L_{F=M}$.

*** Stock abundance is not available, because the survey was not conducted due to the COVID-19 pandemic.

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