

Haddock (*Melanogrammus aeglefinus*) in Division 7.a (Irish Sea)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2024 should be no more than 2263 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} .

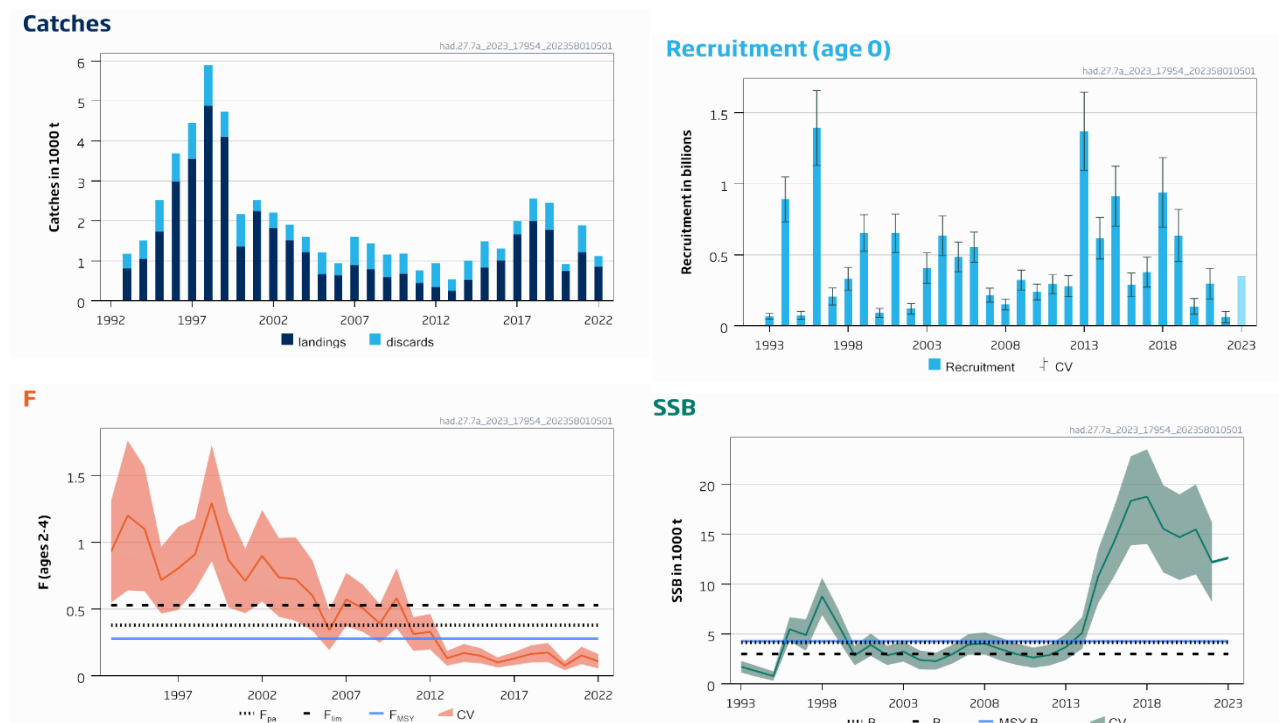


Figure 1 Haddock in Division 7.a. Summary of stock assessment. The assumed 2023 recruitment value is shaded in a lighter colour. The SSB in 2023 is forecasted.

Conservation status

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

Catch scenarios

Table 1 Haddock in Division 7.a. Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
$F_{\text{ages 2-4}}$ (2023)	0.148	$F_{\text{sq}} = F_{\text{average}(2019; 2021; 2022)}$ *
SSB (2024)	9888	Short-term forecast; fishing at F_{sq} , in tonnes
$R_{\text{age 0}}$ (2023-2024)	351715	Geometric Mean (1993–2020), in thousands
Catch (2023)	1496	Fishing at F_{sq} , in tonnes
Projected landings (2023)	1235	Short-term forecast assuming average landing pattern (2020–2022); in tonnes
Projected discards (2023)	261	Short-term forecast assuming average discard pattern (2020–2022); in tonnes

* F in 2020 was assumed to be unrepresentatively low for the fishery due to the COVID-19 disruption. Hence, F_{sq} was assumed as F_{average} (2019–2022), excluding 2020.

Table 2 Haddock in Division 7.a. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch (2024)	Projected landings (2024)	Projected discards (2024)	F_{total} (2024)	$F_{\text{projected landings}}$ (2024)	$F_{\text{projected discards}}$ (2024)	SSB (2025)	% SSB change*	% advice change**
ICES advice basis									
MSY approach: F_{MSY}	2263	1807	456	0.28	0.162	0.118	7073	–28	–14.5
Other scenarios									
EU MAP***: F_{MSY}	2263	1807	456	0.28	0.162	0.118	7073	–28	–14.5
EU MAP*** $F_{\text{MSY lower}}$	1671	1338	333	0.20	0.116	0.084	7613	–23	–37
EU MAP*** $F_{\text{MSY upper}}$	2749	2191	558	0.35	0.20	0.147	6633	–33	3.8
$F = 0$	0	0	0	0.000	0.000	0.000	9159	–7.4	–100
$F = F_{\text{pa}}$	3143	2500	643	0.41	0.24	0.172	6278	–37	18.7
$F = F_{\text{lim}}$	3698	2934	764	0.50	0.29	0.21	5783	–42	40
$\text{SSB}_{2025} = B_{\text{lim}}$	6974	5413	1561	1.23	0.72	0.52	2994	–70	163
$\text{SSB}_{2025} = B_{\text{pa}}$	5565	4367	1198	0.86	0.50	0.36	4160	–58	110
$\text{SSB}_{2025} = \text{SSB}_{2024}^{\wedge}$									
$\text{SSB}_{2025} = \text{MSY } B_{\text{trigger}}$	5422	4259	1163	0.83	0.48	0.35	4281	–57	105
$F = F_{2023}$	1266	1015	251	0.148	0.086	0.062	7985	–19.2	–52

* SSB 2025 relative to SSB 2024.

** Advice value for 2024 relative to the F_{MSY} advice value for 2023 (2648 tonnes).

*** EU multiannual plan (MAP) for the Western Waters (EU, 2019).

\wedge The $\text{SSB}_{2025} = \text{SSB}_{2024}$ option is left blank because it cannot be achieved in 2025, even with zero catches in 2024.

The decrease in catch advice for 2024 is due to a downwards revision in the stock size, mainly owing to the 2022 recruitment having been lower than was initially estimated.

Basis of the advice

Table 3 Haddock in Division 7.a. The basis of the advice.

Advice basis	MSY approach
Management plan	ICES is aware of the multiannual management plan (MAP) that has been adopted by the EU for this stock (EU, 2019) and that ICES considers to be precautionary. There is no agreed shared management plan with UK for this stock, and ICES provides advice according to ICES MSY approach. Catch scenarios consistent with the MAP F_{MSY} ranges are provided.

Quality of the assessment

The NIMIK survey was not available for 2022, and there are lower sampling levels for some fleets that commonly discard haddock. Recent discard rates were used to estimate these unsampled catches. Sensitivity analyses indicated that this has minimal impact on the perception of the stock status.

There is a downward revision of the spawning-stock biomass in the current assessment because of revised maturity estimates derived from the survey data (NIGFS-WIBTS-Q1).

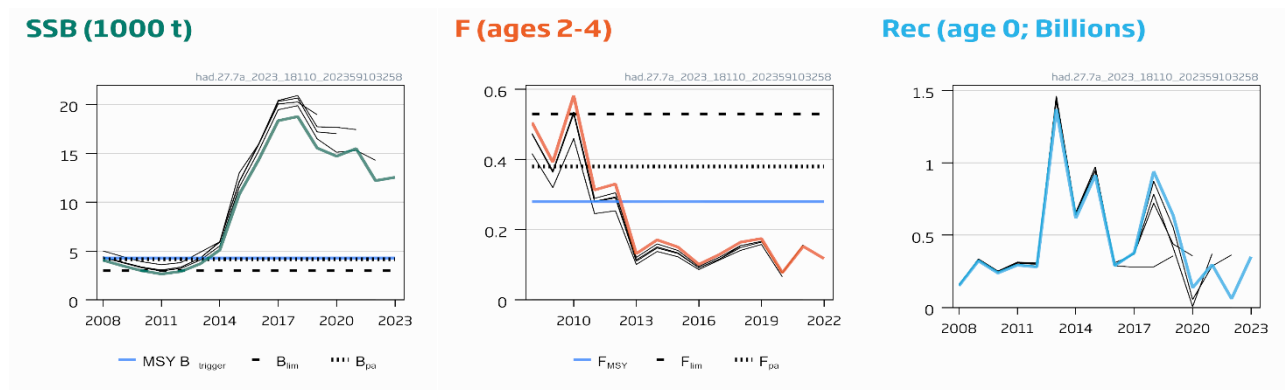


Figure 2 Haddock in Division 7.a. Historical assessment results (final-year SSB estimate and recruitment assumption included).

Issues relevant for the advice

The assessment and the advice are for Division 7.a, excluding the rectangles 33E2 and 33E3 in the Irish Sea. Landings are adjusted to exclude those reported from rectangles 33E2 and 33E3 in the Irish Sea, as they are not considered to be part of this stock (Table 8). The annual reallocation has increased since 2006. In 2022, the reallocation accounted for 102% of ICES landings in Division 7.a and contributed 10% of the estimated landings in divisions 7.b–k. This should be considered when setting TACs for the two management areas for haddock in divisions 7.a and 7.b–k. Changes in the TAC for the haddock stock in Division 7.a may have implications for the fishing pressure on haddock in divisions 7.b–k.

Mixed fisheries considerations

Haddock in Division 7.a is caught as part of a mixed fishery with cod, whiting, and *Nephrops* (ICES, 2022).

Reference points

Table 4 Haddock in Division 7.a. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY B _{trigger}	4281	The 5th percentile of B _{MSY} ; Division 7.a haddock has been fished at or below F _{MSY} for more than five years; in tonnes	ICES (2018)
	F _{MSY}	0.28	Median point estimates of EqSim with a model averaged stock–recruitment relationship	ICES (2018)
Precautionary approach	B _{lim}	2994	Lowest observed SSB with > 75th percentile recruitment; in tonnes	ICES (2018)
	B _{pa}	4160	B _{lim} combined with the assessment error; B _{lim} × exp(1.645 × σ); σ = 0.20; in tonnes	ICES (2018)
	F _{lim}	0.50	F with 50% probability of SSB < B _{lim}	ICES (2018)
	F _{pa}	0.41	F _{P05} ; the F that leads to SSB > B _{lim} with 95% probability	ICES (2018, 2021a)
Management plan	MAP MSY B _{trigger}	4281	MSY B _{trigger} ; in tonnes	ICES (2018) and EU (2019)
	MAP B _{lim}	2994	B _{lim} ; in tonnes	ICES (2018) and EU (2019)
	MAP F _{MSY}	0.28	F _{MSY}	ICES (2018) and EU (2019)
	MAP range F _{lower}	0.20	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2018) and EU (2019)
	MAP range F _{upper}	0.35	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2018) and EU (2019)

Basis of the assessment

Table 5 Haddock in Division 7.a. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023a)
Assessment type	Age-Structured Assessment Programme (ASAP; NOAA toolbox) that uses catches in the model and in the forecast (ICES, 2023b)
Input data	Four survey indices (NIGFS-WIBTS-Q1 [G7144], NIGFS-WIBTS-Q4 [G7655], NIMIK [I9826], UKFSPW [B7897]); annual maturity and growth data from the NIGFS-WIBTS-Q1 (G7144) survey and from commercial landings in Q1. Commercial catch-at-age.
Discards and bycatch	Included in the assessment for the full time-series
Indicators	None
Other information	This stock was benchmarked in 2017 (ICES, 2017); revision in reference points in 2018 (ICES, 2018)
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

History of the advice, catch, and management

Table 6 Haddock in Division 7.a. ICES advice and official landings and ICES catches. Weights are in tonnes.

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC*	Official landings	ICES landings	ICES discards	ICES catches
1987	Not dealt with			6000	1287	1287		
1988	Not dealt with			6000	747	747		
1989	Not dealt with			6000	560	560		
1990	Not dealt with			6000	582	582		
1991	Not dealt with			6000	616	616		
1992	Not dealt with			6000	703	656		
1993	Not dealt with			6000	730	813		
1994	Not dealt with			6000	681	1042		
1995	Not dealt with			6000	841	1736	780	2516
1996	No advice			10000	1453	2981	709	3690
1997	Means of setting catch limits required			14000	1925	3547	895	4442
1998	Catch limit for Division 7.a		3000	20000	3015	4874	1015	5889
1999	No increase in F; catch limit for Division 7.a		7000	4990	2370	4095	634	4729
2000	Reduce F below F_{pa}		< 2800	3400	2447	1357	802	2159
2001	Reduce F below F_{pa}		< 1710	2700	2229	2246	269	2515
2002	Reduce F below F_{pa}		< 1200	1300	1115	1817	387	2204
2003	No cod catches		-	585	674	659**	-	-
2004	$F < F_{pa}$		< 1500	1500	761	1217	392	1609
2005	$F < F_{pa}$		< 1370	1500	547	666	551	1217
2006	Substantial reduction in fishing mortality	-		1275	655	633	306	939
2007	Substantial reduction in fishing mortality	-		1179	1078	886	722	1608
2008	No increase in effort	-		1238	879	786	643	1429
2009	No increase in effort	-		1424	846	581	579	1160
2010	No increase in effort	-		1424	939	679	508	1187
2011	See scenarios	-		1317	813	446	307	753
2012	Reduce catch and improved selectivity	-		1215	814	343	599	942
2013	Decrease catch by 18%	-	< 710	1189	654	254	283	537
2014	Increase catch by 17%	1120	< 572	1181	974	518	488	1006
2015	Increase catch by 20%	< 893	< 425	1181	1155	833	652	1485
2016	Precautionary approach (increase catch by 20%)	≤ 1072	≤ 481	1654	1478	1008	298	1306
2017	MSY approach	≤ 3061	≤ 2348	2615 [#]	2380	1662	333	1995
2018	MSY approach	≤ 3444	≤ 2796	3207	2569	1993	568	2561
2019	MSY approach	≤ 3739	≤ 3334	3739	2553	1778	672	2450
2020	Management plan	3156 (range 2333–3830)		3156	1294	742	234	976
2021	Management plan	3371 (range 2491–4092)		3371	2048 [^]	1219	672	1891

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC*	Official landings	ICES landings	ICES discards	ICES catches
2022	MSY approach	≤ 3038		3038	1714^	851	345	1196
2023	MSY approach	≤ 2648		2648				
2024	MSY approach	≤ 2263						

* Precautionary TAC for subareas 7–10 and CECAF Division 34.1.1 up to 1998. Since 1999, a special condition or separate TAC has been set for Division 7.a.

** Underestimate because of inadequate sampling.

Revised TAC in March 2017.

^ Preliminary.

History of the catch and landings

Table 7 Haddock in Division 7.a. Catch distribution by fleet in 2022 as estimated by ICES.

Catch	Landings					
1196 tonnes	Otter trawls		Scottish seines	Mid-water trawl	Beam trawl	Other gear types
	<i>Nephrops</i> directed fishery	Demersal fish directed fishery	4%	13%	2%	< 1 %
	11%	70%				
	851 tonnes					
	Discards					
	Otter trawls		Scottish seines	Mid-water trawl	Beam trawl	Other gear types
	<i>Nephrops</i> directed fishery	Demersal fish directed fishery	< 1%	1%	1%	< 1%
	89%	8%				
	345 tonnes					

Table 8 Haddock in Division 7.a. History of official landings and ICES estimates of landings. Weights are in tonnes.

Year	Belgium	France	Ireland	Netherlands	UK (England & Wales)*	UK (Isle of Man)	UK (N. Ireland)*	UK (Scotland)**	United Kingdom**	Total	ICES landings^	ICES discards estimates	Reallocation ^^
1984	3	38	199	0	29	2	38	78	-	387	387		
1985	4	31	341	0	28	5	215	104	-	728	728		
1986	5	39	275	0	22	4	358	23	-	726	726		
1987	10	50	797	0	41	3	230	156	-	1287	1287		
1988	12	47	363	0	74	3	196	52	-	747	747		
1989	4	0	215	0	252	3	-	86	-	560	560		
1990	4	0	80	0	177	5	-	316	-	582	582		
1991	1	0	254	0	204	11	-	143	-	616	616		
1992	8	73	251	0	244	13	-	114	-	703	656		
1993	18	41	252	0	260	19	-	140	-	730	813		
1994	22	22	246	0	301	24	-	66	-	681	1042		
1995	32	58	320	0	294	27	-	110	-	841	1736	780	16
1996	34	105	798	1	463	38	-	14	-	1453	2981	709	33
1997	55	74	1005	14	717	9	-	51	-	1925	3547	895	36
1998	104	86	1699	10	1023	13	-	80	-	3015	4874	1015	28
1999	53	n/a	759	5	1479	7	-	67	-	2370	4095	634	34
2000	22	49	1238	2	1061	19	-	56	-	2447	1357	802	11
2001	68	184	652	0	1238	1	-	86	-	2229	2246	269	74
2002	44	72	401	0	551	0	-	47	-	1115	1817	387	82
2003^^^	20	146	229	0	248	0	-	31	-	674	n/a	-	64
2004	15	20	296	0	421	0	-	9	-	761	1217	392	53
2005	22	36	139	0	344	0	-	6	-	547	666	551	35
2006	23	20	184	0	419	0	-	9	-	655	633	306	26
2007	30	11	477	0	559	0	-	1	-	1078	886	722	222
2008	15	6	319	0	521	1	-	17	-	879	786	643	194
2009	7	3	388	0	446	1	-	1	-	846	581	579	285
2010	9	2	333	0	593	0	-	2	-	939	679	508	267
2011	16	8	434	0	355	0	-	-	-	813	446	307	374
2012	13	3	562	0	-	0	-	-	236	814	343	599	473
2013	6	1	492	0	-	0	-	-	155	654	254	283	403
2014	7	0	541	0	-	0	-	-	426	974	518	488	446
2015	7	7	507	0	-	0	-	-	634	1155	833	652	322

Year	Belgium	France	Ireland	Netherlands	UK (England & Wales)*	UK (Isle of Man)	UK (N. Ireland)*	UK (Scotland)**	United Kingdom**	Total	ICES landings^	ICES discards estimates	Reallocation ^^
2016	5	1	646	0	-	1	-	-	825	1478	1008	298	470
2017	5	5	1115	0	-	15	-	-	1240	2380	1662	333	715
2018	4	0	951	0	-	3	-	-	1611	2569	1993	568	532
2019	9	0	1347	0	-	0	-	-	1197	2553	1778	672	764
2020	4	0	759	0	-	0	-	-	531	1294	742	234	559
2021***	3	0	1162	0	-	0	-	-	884	2049	1219	674	827
2022***	7	0	1051	0	-	0	-	-	656	1714	851	345	865

* From 1989 to 2011, Northern Ireland is included with England and Wales.

** Since 2012, Northern Ireland, Scotland, England, and Wales have been combined to UK.

*** Preliminary official landings.

^ Landings in the southern part of Division 7.a (rectangles 33E2 and 33E3) are excluded.

^^ Landings from rectangles 33E2 and 33E3 (belonging to the haddock 7.b–k stock)

^^^ Underestimate or low confidence due to inadequate sampling.

Summary of the assessment

Table 9 Haddock in Division 7.a. Assessment summary. Weights are in tonnes, recruitment (age 0) in thousands. High and Low refer to 95% confidence intervals.

Year	Recruitment			SSB			Landings	Discards *	F 2–4		
	Low	Value	High	Low	Value	High			Low	Value	High
1993	46832	67251	87670	1151	1737	2323	813	365	0.55	0.93	1.31
1994	731847	890768	1049689	715	1262	1808	1042	468	0.64	1.20	1.76
1995	46093	73956	101819	325	798	1272	1736	780	0.63	1.10	1.57
1996	1129332	1393716	1658100	4279	5489	6700	2981	709	0.47	0.72	0.97
1997	147461	207507	267554	3331	4904	6477	3547	895	0.49	0.80	1.12
1998	251585	331688	411792	6889	8770	10652	4874	1015	0.64	0.91	1.18
1999	525383	653933	782484	4343	5918	7494	4095	634	0.86	1.29	1.73
2000	59400	91317	123233	1871	2852	3834	1357	802	0.51	0.87	1.22
2001	516593	651835	787077	2793	3924	5055	2246	269	0.47	0.71	0.95
2002	82436	119880	157323	1894	2866	3837	1817	387	0.56	0.90	1.24
2003	300032	407101	514170	2247	3250	4253	1517	390	0.44	0.74	1.03

Year	Recruitment			SSB			Landings	Discards *	F 2–4		
	Low	Value	High	Low	Value	High			Low	Value	High
2004	494449	634904	775360	1458	2414	3370	1217	392	0.41	0.72	1.04
2005	380613	485551	590490	1434	2285	3135	666	551	0.34	0.60	0.87
2006	447566	554086	660606	2040	2972	3904	633	306	0.192	0.34	0.49
2007	166054	215881	265708	2912	3954	4996	886	722	0.37	0.57	0.77
2008	112226	150358	188490	2944	4057	5170	786	643	0.33	0.51	0.68
2009	252066	322565	393064	2330	3483	4637	581	579	0.25	0.39	0.54
2010	183079	238382	293685	1901	2978	4056	679	508	0.36	0.58	0.81
2011	226397	292905	359414	1628	2644	3661	446	307	0.187	0.31	0.44
2012	206395	280407	354418	1852	2902	3952	343	599	0.197	0.33	0.46
2013	1094738	1370255	1645772	2384	3693	5001	254	282	0.076	0.132	0.188
2014	470789	617220	763652	3507	5105	6702	518	488	0.103	0.171	0.24
2015	701963	913075	1124186	8105	10802	13498	833	652	0.093	0.150	0.21
2016	206232	289283	372334	10832	14350	17868	1008	298	0.063	0.101	0.139
2017	272997	378792	484587	13867	18333	22799	1662	333	0.081	0.130	0.179
2018	696127	940853	1185578	14017	18753	23490	1993	568	0.100	0.164	0.23
2019	453540	637249	820958	11162	15536	19909	1778	672	0.103	0.175	0.25
2020	82037	137003	191969	10407	14695	18984	742	177	0.042	0.077	0.113
2021	189091	297015	404938	10973	15482	19991	1219	672	0.087	0.153	0.22
2022	21096	61276	101456	8226	12199	16172	851	345	0.060	0.118	0.175
2023		351715**			12539						

* Discard estimates available from 2007; prior to 2007, discard estimates are based on limited sampling.

** Geometric mean (1993–2020).

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. 17 pp. <http://data.europa.eu/eli/reg/2019/472/oj>

ICES. 2018. EU request to ICES to provide plausible and updated FMSY ranges for the stocks of species inhabiting western EU waters. In Report of the ICES Advisory Committee, 2018. ICES Advice 2018, eu.2018.04.pdf. <https://doi.org/10.17895/ices.pub.4149>

ICES. 2023a. Advice on fishing opportunities. In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, Section 1.1.1. <https://doi.org/10.17895/ices.advice.22240624>

ICES. 2023b. Working Group for the Celtic Seas Ecoregion (WGCSE). Draft report. ICES Scientific Reports. 5:32. 976 pp. <http://doi.org/10.17895/ices.pub.22268980>. Publication of the full report is expected end of 2023.

[Download the stock assessment data and figures](#)

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