

Haddock (*Melanogrammus aeglefinus*) in divisions 7.b–k (southern Celtic Seas and English Channel)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2025 should be no more than 4 644 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 above F_{MSY} but below F_{pa} and F_{lim} , and spawning-stock size is above $MSY B_{trigger}$, B_{pa} , and B_{lim} .

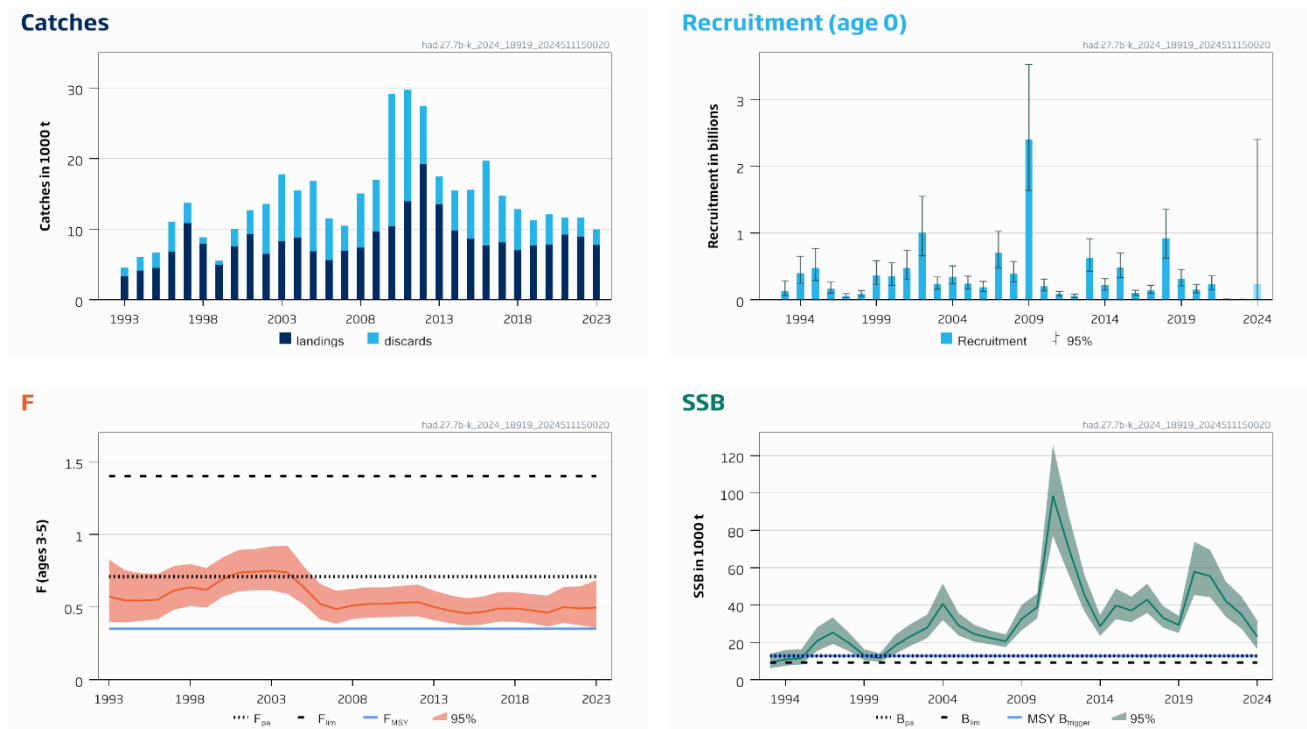


Figure 1 Haddock in divisions 7.b–k. Summary of the stock assessment. The assumed recruitment value for 2024 is shaded in a lighter colour.

Catch scenarios

Table 1 Haddock in divisions 7.b–k. Values in the forecast and for the interim year.

Variable	Value	Notes
$F_{\text{ages 3-5}}$ (2024)	0.50	$F_{\text{Average (2021-2023)}}$, scaled to F_{2023}
SSB (2025)	13307	Short-term forecast; in tonnes
$R_{\text{age 0}}$ (2024, 2025)	234566	Median recruitment, resampled from the years 1993–2023; in thousands
Total catch (2024)	7698	Short-term forecast; in tonnes
Projected landings (2024)	6874	Short-term forecast, assuming average 2021–2023 landing pattern; in tonnes
Projected discards (2024)	824	Short-term forecast, assuming average 2021–2023 discard pattern; in tonnes

Table 2 Haddock in divisions 7.b–k. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F_{total} (2025)	$F_{\text{projected landings}}$ (2025)	$F_{\text{projected discards}}$ (2025)	SSB (2026)	% SSB change*	% advice change^	Probability SSB < B_{lim} in 2026 (%)
ICES advice basis										
MSY approach: F_{MSY}	4644	3375	1269	0.353	0.282	0.071	19379	46	–44	7.5
Other scenarios										
EU MAP ^^: F_{MSY}	4644	3375	1269	0.353	0.28	0.071	19379	46	–44	7.5
EU MAP^^: $F_{\text{MSY lower}}$	3099	2277	822	0.221	0.177	0.044	20896	57	–62	4.5
EU MAP^^: $F_{\text{MSY upper}}$	6353	4548	1805	0.521	0.42	0.105	17715	33	–23	11.6
$F = 0$	0	0	0	0	0	0	24025	81	–100	1.14
F_{pa}	7978	5624	2354	0.71	0.57	0.142	16118	21	–3.3	16.8
F_{lim}	12384	8239	4145	1.40	1.12	0.28	12013	–9.7	50	34
$\text{SSB}_{2026} = B_{\text{lim}}$	15544	9778	5766	2.2	1.75	0.44	9227	–31	88	50
$\text{SSB}_{2026} = B_{\text{pa}} = \text{MSY } B_{\text{trigger}}$	11488	7748	3740	1.23	0.98	0.25	12822	–3.6	39	30
$F = F_{2024}$	6115	4387	1728	0.50	0.40	0.100	17946	35	–26	11.0
$\text{SSB}_{2026} = \text{SSB}_{2025}$	10968	7451	3517	1.14	0.91	0.23	13307	0.00	33	28

* SSB 2026 relative to SSB 2025.

^ Advice value for 2025 relative to the advice value for 2024 (8252 tonnes).

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

The decrease in catch advice in 2025 is due to a combination of historically low recruitments in 2022 and 2023, a decrease in spawning-stock size, and an upward revision of fishing mortality.

Basis of the advice

Table 3 Haddock in divisions 7.b–k. 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 between the EU and 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 recruitment assumption for the interim year has been revised downwards by the assessment in recent years. However, due to the spasmodic recruitment of haddock stocks, resampling from a long-term recruitment time-series has been considered to be appropriate.

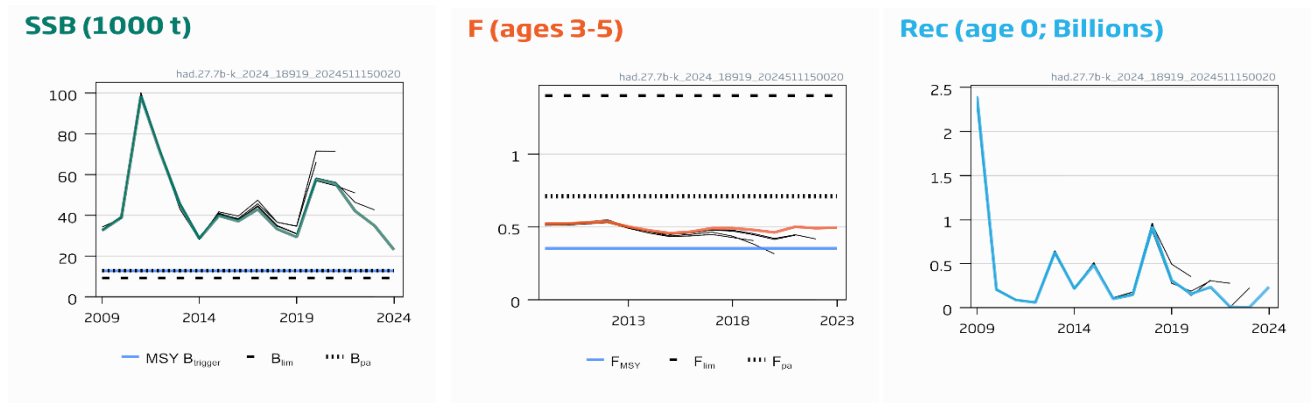


Figure 2 Haddock in divisions 7.b–k. Historical assessment results (final-year recruitment assumption and SSB estimate included).

Issues relevant for the advice

The assessment and the advice are for Division 7.a excluding the rectangles 33E2 and 33E3 as haddock in these rectangles are considered to be part of the had.27.7.bc-e-k stock (western English Channel and southern Celtic Seas). Landings data used in the had.27.7a assessment therefore explicitly exclude those reported from rectangles 33E2 and 33E3 (Table 8). Rectangles 33E2 and 33E3 are incorporated into the advice for had.27.7bc-e-k. In 2023, haddock landings in 33E2 and 33E3 represented 247% of the landings from division 7a and comprised 11% of the landings from the had.27.7.bc-e-k stock. The spatial limitation of the advice should be considered when setting TACs for the two management areas that span the had.27.7a and had.27.7bc-e-k stocks.

High recruitment was last seen in 2018, with historical low observations in 2022 and 2023. The assumed recruitment in 2024 and 2025 contributes 64% to the SSB in 2026, indicating that the forecast stock size is now more uncertain and highly dependent on individual year classes.

If below-average recruitment continues in 2024 or 2025, a steep decline in the stock size would be expected.

Mixed-fisheries considerations

Haddock in divisions 7.b–k is caught as part of a mixed fishery with cod and whiting (ICES, 2023a).

Reference points

Table 4 Haddock in divisions 7.b–k. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	12822	B_{pa} ; in tonnes	ICES (2020)
	F_{MSY}	0.353	Based on simulation using a segmented regression stock–recruitment relationship (EqSim)	ICES (2020)
Precautionary approach	B_{lim}	9227	Lowest observed SSB; in tonnes	ICES (2020)
	B_{pa}	12822	B_{lim} combined with the assessment error; $B_{lim} \times \exp(1.645 \times \sigma)$; $\sigma = 0.20$ (default setting); in tonnes	ICES (2020)
	F_{lim}	1.40	F with 50% probability of $SSB < B_{lim}$	ICES (2020)
	F_{pa}	0.708	F_{p05} ; the F that leads to $SSB \geq B_{lim}$ with 95% probability	ICES (2020)
Management Plan*	MAP MSY $B_{trigger}$	12822	MSY B_{pa} ; in tonnes	EU (2019), ICES (2020)
	MAP B_{lim}	9227	Lowest observed SSB; in tonnes	EU (2019), ICES (2020)
	MAP F_{MSY}	0.353	F_{MSY}	EU (2019), ICES (2020)
	MAP range $F_{MSY lower}$	0.221	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	EU (2019), ICES (2020)
	MAP range $F_{MSY upper}$	0.521	Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY	EU (2019), ICES (2020)

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

Basis of the assessment

Table 5 Haddock in divisions 7.b–k. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023)
Assessment type	Age-based stochastic analytical assessment (SAM; ICES, 2024)
Input data	Commercial catches (age composition of landings and discards); vector autoregressive spatio-temporal (VAST) standardized survey index (combined IGFS-WIBTS-Q4 [G7212] and EVHOE-WIBTS-Q4 [G9527]); maturity data (surveys and observer data; constant for all years); age-dependent natural mortality (time invariant; Lorenzen, 1996)
Discards and bycatch	Included in the assessment for the full time-series. Full observer-based estimates from 2005, partial observer-based estimates from 1993 to 2004.
Indicators	None
Other information	This stock was benchmarked in 2020 (ICES, 2020)
Working groups	Working Group for the Celtic Seas Ecoregion (WGCSE)

History of the advice, catch, and management

Table 6 Haddock in divisions 7.b–k. ICES advice, the agreed TAC, official landings and ICES estimates of 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 ^{^^^}	ICES catch
1987	Not dealt with				3000 ^{^^}	2600 ^{^^}	n/a	2600 ^{^^}
1988	Not dealt with				4000 ^{^^}	3600 ^{^^}	n/a	3600 ^{^^}
1989	Not dealt with				4200 ^{^^}	3200 ^{^^}	n/a	3200 ^{^^}
1990	Not dealt with				2900 ^{^^}	2000 ^{^^}	n/a	2000 ^{^^}
1991	Not dealt with				2900 ^{^^}	2300 ^{^^}	n/a	2300 ^{^^}
1992	Not dealt with				2900 ^{^^}	2700 ^{^^}	n/a	2700 ^{^^}
1993	Not dealt with				3400 ^{^^}	3348	1208	4556
1994	Not dealt with				4076	4131	1886	6017
1995	Not dealt with			6000 [*]	4468	4470	2218	6688
1996	Not dealt with			7000 ^{**}	6653	6756	4309	11065
1997	Not dealt with			14000	10270	10827	2883	13710
1998	Not dealt with			20000	7360	7928	934	8862
1999	Not dealt with			22000 ^{***}	5247	4970	586	5556
2000	No expansion of catches			16600 ^{***}	6656	7499	2503	10002
2001	No expansion of catches			12000 ^{***}	9702	9278	3418	12696
2002	No expansion of catches		8000	9300 ^{***}	7089	6488	7073	13561
2003	No expansion of catches		7200	8185 ^{***}	8241	8292	9456	17748
2004	No increase in F			9600 ^{***}	8453	8777	6750	15527
2005	No increase in effort			11520 ^{***}	6867	6839	9953	16792
2006	No increase in effort			11520 ^{***}	5621	5592	5899	11491
2007	No increase in effort			11520 ^{***}	6628	6961	3552	10513
2008	Same advice as last year			11579 ^{***}	6234	7392	7660	15052
2009	Same advice as last year			11579 [^]	9308	9664	7322	16986
2010	Same advice as last year			11579 [^]	9999	10429	18701	29130
2011	See scenarios			13316 [^]	13709	13957	15807	29764
2012	No increase in catch and technical measures to reduce discard rates			16645 [^]	18221	19196	8285	27481
2013	MSY transition		< 9500	14148 [^]	13098	13538	3962	17501
2014	MSY transition	< 5281	< 3602	9479 [^]	9372	9846	5619	15464
2015	MSY approach	< 10434	< 5605	8342 [^]	8229	8608	6941	15549
2016	MSY approach	≤ 8590	≤ 6078	7258 [^]	7024	7648	12065	19713
2017	MSY approach	≤ 12444	≤ 7751	7751 [^]	7374	8099	6691	14789
2018	MSY approach	≤ 8358	≤ 5911	6910 [^]	6595	7046	5798	12844
2019	MSY approach	≤ 6317		8329 [^]	6861	7656	3603	11259

Year	ICES advice	Catch corresponding to advice	Landings corresponding to advice	Agreed TAC	Official landings	ICES landings ^{##}	ICES discards ^{^^^}	ICES catch
2020	Management plan	16671 (range 11418–23262)		10859 [^]	7308	7859	4260	12119
2021	Management plan	18382 (range 12128–25454)		15000 [^]	8447	9260	2385	11645
2022	MSY approach	≤ 15946		15000 [^]	8025 [#]	8895	2773	11668
2023	MSY approach	≤ 11901		11901 [^]	6878 [#]	7718	2246	9964
2024	MSY approach	≤ 8252		8252 [^]				
2025	MSY approach	≤ 4644						

* Applies to subareas 7–10.

** Increased in-year to 14 000 tonnes.

*** Includes separate Division 7.a allocation.

[^] Applies to divisions 7.b–k and subareas 8–10.

^{^^} Values presented to the nearest 100.

^{^^^} Discard estimates are available from 2005; prior to 2005, discard estimates are based on limited sampling.

[#] Preliminary.

^{##} Including landings from rectangles 33E2 and 33E3 since 2003.

History of the catch and landings

Table 7 Haddock in divisions 7.b–k. Catch distribution by fleet in 2023, as estimated by ICES.

Catch	Landings				Discards			
	Otter trawls	Beam trawls	Gillnets	Other	Otter trawls	Beam trawls	Gillnets	Other
9964 tonnes	63.8%	4.5%	4.7%	27.1%	22.7%	74.4%	0.4%	2.5%
	7718 tonnes				2246 tonnes			

Table 8 Haddock in divisions 7.b–k. History of commercial landings by country and ICES estimates of landings and discards. Weights are in tonnes.

Year	Official landings						ICES estimates			
	Belgium	France	Ireland	UK	Others	Total	Landings from rectangles 33E2 and 33E3 ^{**}	Landings	Discards ^{***}	Catch
1993	51	1839	1262	256	0	3408		3348	1208	4556
1994	123	2788	908	240	17	4076		4131	1886	6017
1995	189	2964	966	266	83	4468		4470	2218	6688
1996	133	4527	1468	439	86	6653		6756	4309	11065
1997	246	6581	2789	569	85	10270		10827	2883	13710
1998	142	3674	2788	444	312	7360		7928	934	8862
1999	51	2725	2034	278	159	5247		4970	586	5556
2000	90	3088	3066	289	123	6656		7499	2503	10002

Year	Official landings						ICES estimates			
	Belgium	France	Ireland	UK	Others	Total	Landings from rectangles 33E2 and 33E3**	Landings	Discards ***	Catch
2001	165	4842	3608	422	665	9702		9278	3418	12696
2002	132	4348	2188	315	106	7089		6488	7073	13561
2003	118	5781	1867	393	82	8241	64	8292	9456	17748
2004	136	6130	1715	313	159	8453	53	8777	6750	15527
2005	167	4174	2037	292	197	6867	35	6839	9953	16792
2006	99	3191	1874	274	183	5621	26	5592	5899	11491
2007	119	4143	1931	385	50	6628	222	6961	3552	10513
2008	109	3638	1800	566	121	6234	194	7392	7660	15052
2009	131	5430	2983	716	48	9308	285	9664	7322	16986
2010	170	6240	2609	852	128	9999	267	10429	18701	29130
2011	211	8389	3323	1657	129	13709	374	13957	15807	29764
2012	232	11793	4129	1901	166	18221	473	19196	8285	27481
2013	174	8747	2699	1455	23	13098	410	13538	3962	17501
2014	99	6375	2092	785	21	9372	444	9846	5619	15464
2015	118	5679	1657	769	6	8229	322	8608	6941	15549
2016	88	4487	1730	692	27	7024	468	7648	12065	19713
2017	110	4885	1677	690	12	7374	715	8099	6691	14789
2018	89	4470	1444	583	9	6595	532	7046	5798	12844
2019	90	4526	1559	516	170	6861	764	7656	3603	11259
2020	107	3808	2628	543	222	7308	559	7859	4260	12119
2021	155	4249	3379	515	149	8447	827	9260	2385	11645
2022*	190	3904	3110	587	234	8025	865	8895	2773	11668
2023*	108	2855	2987	642	287	6878	831	7718	2246	9964

* Preliminary official landings.

** Landings in the southern part of Division 7.a (rectangles 33E2 and 33E3) are included in the assessment and are considered part of the stock.

*** Prior to 2005, discard estimates are based on limited sampling.

Summary of the assessment

Table 9 Haddock in divisions 7.b–k. Assessment summary. “High” and “Low” refer to 95% confidence intervals. Weights are in tonnes and recruitment in thousands.

Year	Recruitment (age 0)			SSB			Landings	Discards**	Fishing mortality ages 3–5		
	Low	Value	High	Low	Value	High			Low	Value	High
1993	65039	136156	285039	6115	9236	13948	3348	1208	0.40	0.57	0.83
1994	245618	400185	652018	7566	10995	15979	4131	1886	0.40	0.55	0.76
1995	291900	473824	769133	8183	11578	16381	4470	2218	0.41	0.55	0.73
1996	102561	165127	265861	15401	20813	28128	6756	4309	0.42	0.55	0.73

Year	Recruitment (age 0)			SSB			Landings	Discards**	Fishing mortality ages 3–5		
	Low	Value	High	Low	Value	High			Low	Value	High
1997	36627	58956	94897	19167	25326	33465	10827	2883	0.48	0.61	0.78
1998	53458	86301	139320	15485	19884	25534	7928	934	0.51	0.64	0.80
1999	227790	365380	586077	10497	13147	16466	4970	586	0.50	0.62	0.77
2000	218042	347571	554046	9579	11655	14180	7499	2503	0.57	0.69	0.84
2001	303962	475192	742878	14056	18511	24378	9278	3418	0.61	0.74	0.89
2002	658021	1009731	1549426	18376	23546	30171	6488	7073	0.62	0.74	0.90
2003	157956	232693	342794	22289	27899	34920	8292	9456	0.61	0.75	0.92
2004	237526	347182	507463	31972	40622	51612	8777	6750	0.59	0.74	0.92
2005	165861	242907	355744	23704	29128	35793	6839	9953	0.52	0.64	0.78
2006	125904	186495	276245	20371	24529	29534	5592	5899	0.41	0.52	0.66
2007	479952	703465	1031067	19042	22418	26392	6961	3552	0.39	0.49	0.61
2008	269643	393393	573936	17484	20644	24375	7392	7660	0.42	0.51	0.63
2009	1636595	2401344	3523446	26402	32509	40029	9664	7322	0.43	0.52	0.64
2010	133955	204335	311691	32758	38900	46193	10429	18701	0.43	0.52	0.64
2011	59521	86208	124860	77023	98507	125983	13957	15807	0.44	0.53	0.65
2012	38240	56808	84390	56384	70609	88423	19196	8285	0.44	0.54	0.66
2013	429961	627247	915056	36601	45453	56447	13538	3962	0.41	0.50	0.61
2014	145940	215795	319087	23476	28588	34814	9846	5619	0.39	0.48	0.58
2015	331718	482405	701543	32384	39786	48880	8608	6941	0.37	0.46	0.56
2016	67204	98216	143538	30886	37113	44595	7648	12065	0.38	0.47	0.57
2017	95422	144659	219303	35825	42970	51540	8099	6691	0.40	0.49	0.60
2018	625003	920762	1356477	27966	33265	39568	7046	5798	0.40	0.49	0.60
2019	209689	308835	454858	25080	29349	34345	7656	3603	0.39	0.48	0.59
2020	104372	154967	230086	45339	57873	73873	7859	4260	0.37	0.46	0.58
2021	151342	234566	363555	44201	55479	69635	9260	2385	0.39	0.50	0.64
2022	4759	8353	14660	33702	42137	52684	8895	2773	0.38	0.49	0.64
2023	1827	4104	9217	27276	34916	44696	7718	2246	0.36	0.50	0.69
2024	4104	234566*	2401344	16427	23051	31739					

* Median resampled (1993–2023), as estimated by stochastic projection.

** Discard estimates are available from 2005; prior to 2005, discard estimates are based on limited sampling.

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. 2020. Benchmark Workshop on Celtic Sea Stocks (WKCELTIC). ICES Scientific Reports, 2:97. 166 pp. <http://doi.org/10.17895/ices.pub.5983>
- 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. 2024. Working Group for the Celtic Seas Ecoregion (WGCSE). ICES Scientific Reports. 6:44. <https://doi.org/10.17895/ices.pub.25866667>
- Lorenzen, K. 1996. The relationship between body weight and natural mortality in juvenile and adult fish: a comparison of natural ecosystems and aquaculture. *Journal of Fish Biology*, 49: 627–642. <https://doi.org/10.1111/j.1095-8649.1996.tb00060.x>

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