

## Haddock (*Melanogrammus aeglefinus*) in Division 5.b (Faroes grounds)

### ICES advice on fishing opportunities

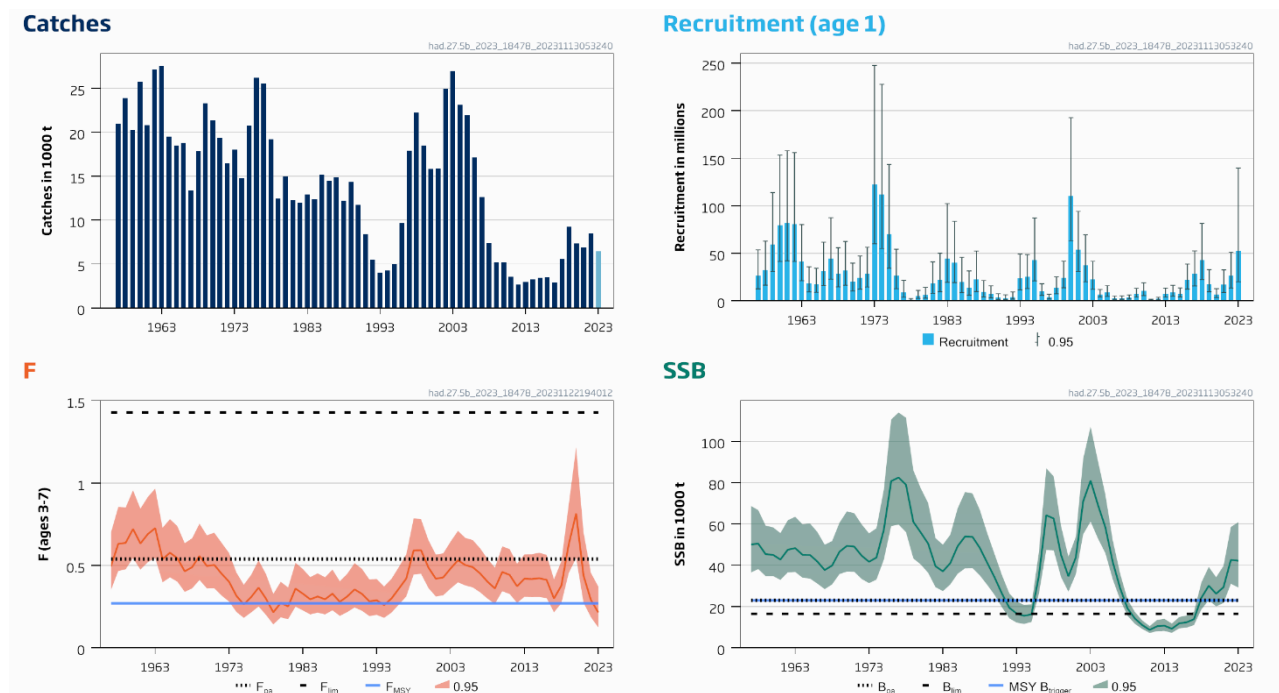
ICES advises that when the MSY approach is applied, catches in 2024 should be no more than 12 145 tonnes. ICES is not in a position to advise on the corresponding level of fishing effort.

### 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 5.b (Faroes grounds). Summary of the stock assessment. Catches in 2023 are assumed and used in the assessment to produce an estimate of F in 2023.

### Conservation status

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

**Catch scenarios**

**Table 1** Haddock in Division 5.b (Faroes grounds). Assumptions made for the interim year and in the forecast.

Variable	Value	Notes
F <sub>ages 3-7</sub> (2023)	0.22	Based on catch estimate of 6478 tonnes in 2023
SSB (2024)	60502	In tonnes
R <sub>age 1</sub> (2024)	8887	Median of resampled estimates from 2000–2022; in thousands
Landings (2023)	6478	Catch estimate for 2023 based on catch statistics to the end of September extrapolated to the entire year; in tonnes
Discards (2023)	0	Discard is considered negligible; in tonnes

**Table 2** Haddock in Division 5.b (Faroes grounds). Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2024)	F <sub>ages 3-7</sub> (2024)	SSB (2025)	% SSB change*	% advice change**
ICES advice basis					
MSY approach: F <sub>MSY</sub>	12145	0.27	76441	26	3
Other scenarios					
F = 0	0	0	91913	52	-100
F = F <sub>2023</sub>	10418	0.23	78770	30	-12
F = F <sub>pa</sub>	21110	0.54	65062	8	78
F = F <sub>lim</sub>	37751	1.43	45216	-25	219

\* SSB (2025) relative to SSB (2024) (60 502 tonnes).

\*\* The advice value for 2024 relative to the advice value for 2023 as issued in 2022 (11 853 tonnes).

**Basis of the advice**

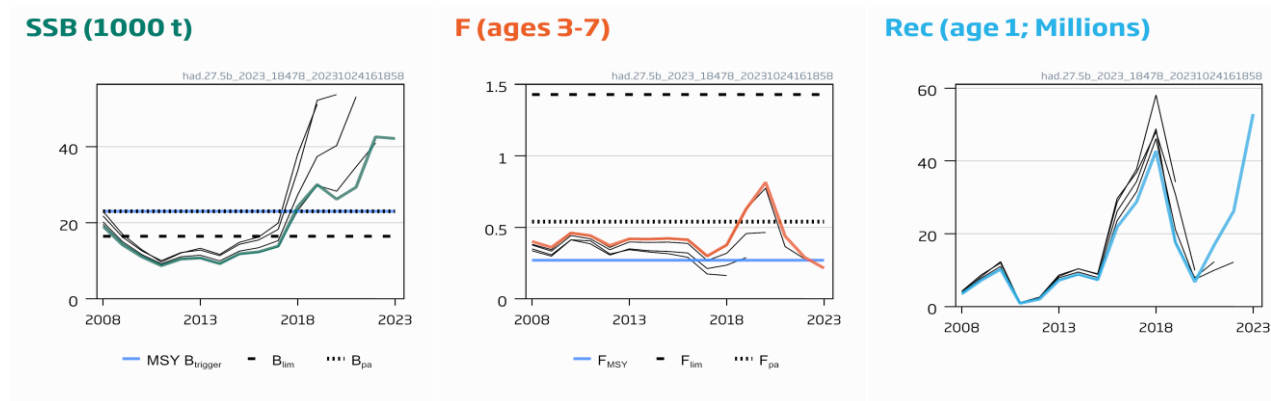
**Table 3** Haddock in Division 5.b (Faroes grounds). The basis of the advice.

Advice basis	MSY approach
Management plan	A management plan (Anon., 2019) was implemented in 2021, but ICES has not been requested to evaluate it

**Quality of the assessment**

The assessment of SSB and F in 2023 shows a high level of consistency with results from the previous assessment. The estimate of recruitments for 2021 and 2022 has been revised upwards considerably.

The relationship between catches from January to September and total year catch gives a preliminary estimate of catch in 2023 that is well below the ICES advice.



**Figure 2** Haddock in Division 5.b (Faroes grounds). Historical assessment results. Results of the last five assessments are plotted, with the solid coloured line representing the current assessment. The plot does not show the line for fishing mortality that ends in 2021 because this year’s assessment estimated fishing mortality in the current year (year y), while the last year in previous assessments was the last full calendar year (year y-1). The final year F in 2023 for the current assessment is based on estimated catch.

## Issues relevant for the advice

Faroe Plateau cod and Faroe haddock are caught in a mixed fishery.

In 2021, the Faroese authorities implemented a management plan (Anon., 2019) with a control rule that regulates the number of fishing days for cod, haddock, and saithe in the Faroe Plateau fishery. The management plan has not been evaluated by ICES; therefore, ICES bases its advice on the MSY approach.

ICES cannot quantify the relationship between effort and F for this stock.

## Reference points

**Table 4** Haddock in Division 5.b (Faroes grounds). Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	23030 t	$B_{pa}$	ICES (2022c)
	$F_{MSY}$	0.27	Stochastic simulations based on a segmented regression stock–recruitment relationship	ICES (2022c)
Precautionary approach	$B_{lim}$	16458 t	The lowest biomass that has led to good recruitment	ICES (2022c)
	$B_{pa}$	23030 t	$B_{lim} \times \exp(1.645 \times \sigma)$ , where $\sigma = 0.204$	ICES (2022c)
	$F_{lim}$	1.43	Stochastic simulations (ICES, 2022) that give a 50% probability of $SSB > B_{lim}$	ICES (2022c)
	$F_{pa}$	0.54	$F_{P05}$ ; the F that leads to $SSB \geq B_{lim}$ with 95% probability	ICES (2022c)
Management plan	$SSB_{mgt}$	Not applicable		
	$F_{mgt}$	Not applicable		

## Basis of the assessment

**Table 5** Haddock in Division 5.b (Faroes grounds). Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2023a)
Assessment type	SAM with catch-at-age data and age-disaggregated indices, using catches in the model and in the forecast (ICES, 2022c)
Input data	Commercial catches (mainly Faroese catches, ages and length frequencies from catch sampling); survey indices (FO-GFS-Q1 [G1264], and FO-GFS-Q3 [G3284]); annual maturity data from FO-GFS-Q1 (G1264); natural mortality set at 0.2. Preliminary estimate of catch-at-age in the year (January to September) in which the assessment is carried out
Discards and bycatch	Discarding is considered negligible
Indicators	None
Other information	Interbenchmark in 2022 (ICES, 2022a)
Working group report	Northwestern Working Group (NWWG)

## History of the advice, catch, and management

**Table 6** Haddock in Division 5.b (Faroes grounds). ICES advice and catch. Weights are in tonnes.

Year	ICES advice	Catch corresponding to advice	Agreed TAC*	ICES catch
1987	No increase in F	17000		14882
1988	No increase in F	18000		12178
1989	No increase in F	11000		14325
1990	No increase in F	11000		11726
1991	TAC	11000		8429
1992	TAC	13000–15000		5476
1993	Reduction in F	8000		4026
1994	No fishing	0	6200	4252
1995	No fishing	0	6200	4948
1996	TAC	8300	12600	9642
1997	$F = F(95)$	9300		17924

Year	ICES advice	Catch corresponding to advice	Agreed TAC*	ICES catch
1998	F = F(96)	16000		22210
1999	F < proposed F <sub>pa</sub> (0.25)	9000		18482
2000	F < proposed F <sub>pa</sub> (0.25)	22000		15799
2001	F < proposed F <sub>pa</sub> (0.25)	20000		15891
2002	No fishing	0		24929
2003	F < proposed F <sub>pa</sub> (0.25)	12000		26942
2004	F < proposed F <sub>pa</sub> (0.25)	21000		23100
2005	F < proposed F <sub>pa</sub> (0.25)	19000		21944
2006	F < proposed F <sub>pa</sub> (0.25)	18000		17154
2007	F < 0.20	16000		12630
2008	F <sub>pa</sub>	14000		7388
2009	No fishing and recovery plan	0		5196
2010	No fishing and recovery plan	0		5202
2011	No direct fishing; minimize bycatch, implement recovery plan	0		3546
2012	No direct fishing; minimize bycatch, implement recovery plan	0		2634
2013	No direct fishing; minimize bycatch, implement recovery plan	0		2924
2014	No direct fishing; minimize bycatch, implement recovery plan	0		3252
2015	No direct fishing; minimize bycatch, implement recovery plan	0		3421
2016	No direct fishing; minimize bycatch, implement recovery plan	0		3470
2017	MSY approach (F ≤ 0.17)	≤ 3500		2863
2018	MSY approach (F ≤ 0.165)	≤ 4570		5549
2019	MSY approach	≤ 7366		9218
2020	MSY approach	≤ 11590		7329
2021	MSY approach	≤ 11440		6882
2022	MSY approach	≤ 8639		8444
2023	MSY approach	≤ 11853		
2024	MSY approach	≤ 12145		

\* Not applicable since 1997.

### History of the catch and landings

**Table 7** Haddock in Division 5.b (Faroes grounds). Catch distribution by fleet in 2022 as estimated by ICES. Weights are in tonnes.

Catch	Landings		Discards
	Longlines	Trawls	
8444 tonnes	84%	16%	Negligible
	8444 tonnes		

There are no reported catches in NEAFC regulatory areas.

**Table 8** Haddock in Division 5.b (Faroes grounds). History of commercial catch by country. Weights are in tonnes.

Year	Faroe Islands	England	France	Germany	Iceland	Norway	Scotland	Spain	Greenland	Russia	Total
2000	15185	19	6	1	0	403	185	0	0	0	15799
2001	15406	4	8	2	0	323	148	0	0	0	15891
2002	24474	11	2	6	4	255	177	0	0	0	24929
2003	26419	14	4	1	0	319	185	0	0	0	26942
2004	22589	8	0	6	0	246	186	49	0	16	23100
2005	20616	1	0	0	0	257	1070	0	0	0	21944
2006	16975	1	12	1	0	58	106	0	1	0	17154
2007	12499	0	4	0	0	69	50	0	9	0	12631
2008	7284	0	3	0	0	31	65	0	0	10	7393
2009	5087	0	2	0	0	11	91	0	6	0	5197
2010	5110	0	1	0	0	6	73	0	12	0	5202
2011	3544	0	2	0	0	0	0	0	0	0	3546
2012	2631	0	1	0	2	0	0	0	0	0	2634

Year	Faroe Islands	England	France	Germany	Iceland	Norway	Scotland	Spain	Greenland	Russia	Total
2013	2924	0	0	0	0	0	0	0	0	0	2924
2014	2827	350	0	0	0	2	74	0	0	0	3252
2015	2966	428	1	0	0	5	21	0	0	0	3421
2016	3201	252	5	0	0	11	0	0	0	0	3470
2017	2771	86	1	0	0	6	0	0	0	0	2863
2018	5383	143	0	0	0	23	0	0	0	0	5549
2019	9010	167	0	0	0	42	0	0	0	0	9218
2020	7095	183	1	0	0	50	0	0	0	0	7329
2021	6859	0	4	0	0	20	0	0	0	0	6882
2022*	8195	241				8					8444

\* Preliminary.

### Summary of the assessment

**Table 9** Haddock in Division 5.b (Faroes grounds). Assessment summary. Recruitment is in thousands. Catch and SSB are in tonnes.

Year	Recruitment			SSB			Total Catch	F		
	Low	Midpoint	High	Low	Midpoint	High		Low	Midpoint	High
1957	12693	26101	53672	36500	50113	68802	20995	0.35	0.49	0.70
1958	16516	32215	62839	38152	50454	66722	23871	0.47	0.63	0.86
1959	30881	59325	113967	34727	45347	59215	20239	0.48	0.64	0.85
1960	41490	79786	153426	34786	45074	58406	25727	0.55	0.72	0.96
1961	42136	81593	157998	32903	42774	55606	20831	0.48	0.63	0.85
1962	41419	80388	156021	36563	47541	61816	27151	0.52	0.69	0.92
1963	21201	41246	80242	36761	48324	63524	27571	0.55	0.73	0.97
1964	9345	18289	35790	33932	45057	59831	19490	0.40	0.54	0.73
1965	8905	17470	34274	33573	44993	60298	18479	0.43	0.58	0.78
1966	16090	31516	61733	31117	41810	56176	18766	0.40	0.55	0.74
1967	22763	44641	87545	28418	37689	49984	13381	0.34	0.47	0.64
1968	14660	28656	56015	30722	39876	51758	17852	0.36	0.49	0.67
1969	16416	32055	62593	35743	46563	60658	23272	0.41	0.56	0.76
1970	10362	20284	39708	36918	49404	66113	21361	0.36	0.50	0.68
1971	12323	24125	47231	36822	49024	65269	19393	0.36	0.50	0.70
1972	14531	28618	56360	33341	44665	59835	16485	0.32	0.45	0.64
1973	60123	122040	247721	31331	41692	55478	18035	0.28	0.40	0.58
1974	55079	112019	227824	33021	43741	57942	14773	0.22	0.32	0.46
1975	34246	70120	143577	42628	57136	76580	20715	0.182	0.26	0.38
1976	12730	26299	54330	58964	80767	110632	26211	0.22	0.31	0.44
1977	3732	8960	21510	59694	82502	114024	25555	0.25	0.37	0.53
1978	424	1042	2557	56032	79037	111485	19200	0.20	0.30	0.45
1979	2470	5220	11030	43287	61036	86064	12424	0.142	0.22	0.33
1980	2755	6261	14231	40378	55891	77365	15016	0.185	0.27	0.40
1981	7893	17991	41009	36359	50532	70229	12233	0.174	0.25	0.37
1982	9612	21939	50076	29394	39540	53186	11937	0.25	0.36	0.52
1983	19458	44623	102333	27474	37055	49976	12894	0.23	0.33	0.48
1984	19189	40083	83729	30691	41018	54820	12378	0.20	0.30	0.43
1985	8720	19983	45794	35869	49242	67603	15143	0.21	0.31	0.45
1986	5940	13673	31476	38535	53944	75514	14477	0.20	0.30	0.43
1987	9752	22597	52363	38663	53793	74846	14882	0.23	0.33	0.48
1988	4039	9319	21503	35068	48430	66882	12178	0.194	0.28	0.41
1989	3023	6921	15845	30508	41220	55693	14325	0.22	0.31	0.45
1990	1444	3295	7521	25619	34132	45475	11726	0.25	0.36	0.52

Year	Recruitment			SSB			Total Catch	F		
	Low	Midpoint	High	Low	Midpoint	High		Low	Midpoint	High
1991	1235	2809	6391	19597	26277	35234	8429	0.23	0.33	0.48
1992	1798	4102	9357	14285	19409	26372	5476	0.193	0.28	0.42
1993	11532	23824	49221	12197	16593	22572	4026	0.20	0.29	0.42
1994	12928	25104	48746	11590	15508	20751	4252	0.182	0.26	0.37
1995	21069	42867	87219	12533	16256	21086	4948	0.21	0.30	0.42
1996	5737	10174	18044	26247	34942	46517	9642	0.26	0.36	0.49
1997	1941	3654	6879	47426	64245	87028	17924	0.31	0.42	0.57
1998	7471	13728	25226	47241	62649	83081	22210	0.45	0.59	0.79
1999	13775	23967	41697	34254	44967	59029	18482	0.45	0.59	0.78
2000	63165	110338	192740	27171	34654	44198	15799	0.36	0.49	0.66
2001	30840	53882	94142	35604	43791	53862	15891	0.31	0.42	0.57
2002	20104	37380	69502	55001	71022	91709	24929	0.32	0.43	0.57
2003	12179	22523	41652	61172	80993	107236	26942	0.36	0.48	0.65
2004	3875	6821	12006	52931	69217	90513	23100	0.40	0.53	0.71
2005	4730	8704	16017	45864	58380	74311	21944	0.38	0.50	0.67
2006	1483	2735	5042	33168	41582	52129	17154	0.37	0.49	0.66
2007	1563	2874	5285	23259	28939	36006	12631	0.34	0.45	0.61
2008	1964	3491	6204	15533	19095	23472	7393	0.30	0.40	0.54
2009	3922	7192	13189	11623	14224	17407	5197	0.27	0.36	0.49
2010	5513	10231	18988	9135	11028	13312	5203	0.34	0.46	0.62
2011	455	876	1685	7194	8715	10559	3546	0.33	0.44	0.60
2012	1081	2023	3787	8090	10461	13528	2634	0.27	0.37	0.51
2013	3900	7203	13303	8197	10745	14085	2924	0.31	0.42	0.57
2014	4843	8887	16306	7268	9252	11777	3252	0.31	0.42	0.57
2015	3979	7357	13601	9434	11870	14935	3421	0.31	0.42	0.58
2016	12333	21846	38697	9795	12383	15653	3470	0.30	0.41	0.56
2017	15732	28750	52538	11015	13899	17538	2863	0.22	0.30	0.42
2018	22423	42754	81521	18591	24261	31660	5549	0.27	0.38	0.53
2019	9459	17636	32880	23077	30089	39231	9218	0.45	0.63	0.87
2020	3527	6728	12835	20071	26223	34259	7329	0.55	0.82	1.22
2021	8824	16945	32540	21735	29390	39742	6882	0.27	0.44	0.70
2022	13439	26244	51247	31007	42627	58601	8444	0.186	0.29	0.46
2023*	20025	52907	139782	29235	42189	60882	6478	0.124	0.22	0.37

\* Catch estimate based on catch statistics to the end of September extrapolated to the entire year.

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