

Cod (Gadus morhua) in Subdivision 5.b.2 (Faroe Bank)

ICES advice on fishing opportunities

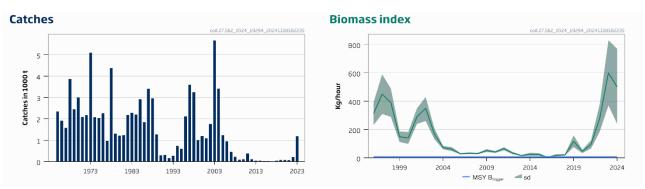
ICES advises that when the precautionary approach (PA) is applied, catches should be no more than 575 tonnes in 2025. ICES is not in a position to advise on the corresponding level of fishing effort.

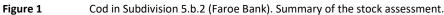
Non-fisheries conservation considerations

ICES has not identified any conservation aspects other than those related to the commercial fisheries.

Stock development over time

Stock size is above MSY Btrigger (Itrigger); no reference points for fishing pressure have been defined for this stock.





Catch scenarios

C _y : Average catch (2021–2023)			479 tonnes
Biomass index			
Index A (2023–2024)			552 kg/hour
Index B (2020–2022)			141 kg/hour
r: Stock biomass trend (index ratio A/B)			3.9
Biomass safeguard			
Last index value (I ₂₀₂₂)			503 kg/hour
Index trigger value (I _{trigger})			8 kg/hour
b: index relative to trigger value, min{I ₂₀₂₂ /I _{trigger} , 1}			1.00
Precautionary multiplier to maintain biomass above Blim with 955	% probability		
m: multiplier (generic multiplier based on life history)			0.50
RB calculation**			939 tonnes
Stability clause (+20%/-30% compared to A _y , only considered if b=1)		Applied	1.20
Catch advice A _{y+1} for 2025**			575 tonnes
% advice change***			642

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

** Formula: $A_{y+1} = C_y \times r \times b \times m$, limited by stability clause if applicable.

*** Advice value for 2025 relative to the advice value for 2024 (78 tonnes). Note that the advice for 2025 is based on recent average catches.

The ICES framework for category 3 stocks was applied (ICES, 2022a). The advice is based on the *rb* rule to provide maximum sustainable yield (MSY) advice. A survey biomass index was used as an indicator of stock development. The advice is based

by ICES advice requesters (European Union, Faroe Islands, Greenland, Iceland, NASCO, NEAFC, Norway, and United Kingdom).

on the average of the last three-year catches, 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 biomass safeguard, and a precautionary multiplier.

The advice for 2025 has increased in relation to 2023 due to an increase of the biomass index and the use of the average of the last three years catches in the advice rule.

Basis of the advice

Table 2Cod in Subdivision 5.b.2 (Faroe Bank). The basis of the advice.				
Advice basis Precautionary approach				
Management plan	ICES is not aware of any agreed precautionary management plan for cod in this area			

Quality of the assessment

The assessment is based on catch rates in the Faroese summer survey. The summer survey suggest that the biomass is generally increasing since 2019. Although both the spring and the summer surveys have declined from 2023 to 2024, values since 2020 have been high.

Issues relevant for the advice

The Faroe Bank (shallow areas < 200 m) has been closed to commercial fisheries from 2008 to 2021, except for a small handline fishery. Over the last 10 years catches have been limited to bycatch from fisheries in deeper waters around the Faroe Bank and small catches from handlining. In 2022 the fishery reopened to longlining and is managed by effort (fishing days).

The standard advice rule for this stock is category 3 (*rb* rule, method 2.3), however, this rule lacks functionality to increase advised catches corresponding to a fast rate of rebuilding, therefore the advice for 2025 is based on recent average catch (2021–2023). The advice in 2024 is given only for one year.

Reference points

 Table 3
 Cod in Subdivision 5.b.2 (Faroe Bank). Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
Maximum	MSY B _{trigger proxy}	8	Biomass index trigger value, defined as I _{trigger} = I _{loss} ×1.4, where I _{loss} is the lowest observed historical biomass index value, mean of standardized survey CPUE; in kg/hour.	ICES (2022, 2023a)
sustainable yield	F _{MSY proxy}	Not defined		
(MSY) approach	F _{lim}	Not defined		
	F _{pa}	Not defined		
Management	SSB _{mgt}	Not defined		
plan	F _{mgt}	Not defined		

Basis of the assessment

 Table 4
 Cod in Subdivision 5.b.2 (Faroe Bank). Basis of the assessment and advice.

ICES stock data category	3 (<u>ICES, 2023b</u>)
Assessment type	Survey biomass index applying the rb rule for advice (ICES, 2023a)
Input data	Landings and Faroese summer groundfish bottom trawl survey FO-GFS-Q3 [G3284]
Discards and bycatch	Discarding is considered negligible
Indicators	Spring survey FO-GFS-Q1 [G1264], and mean length frequencies from the spring FO-GFS-Q1 [G1264] and summer FO-GFS-Q3 [G3284] surveys
Other information	None
Working group	Northwestern Working Group (<u>NWWG</u>)

History of the advice, catch, and management

		Predicted catch		
Year	ICES advice	corresponding to advice	Agreed TAC**	Landings*
1987	No assessment	-		35
1988	No assessment	-		31
1989	Addition to Faroe Plateau TAC	~2000		14
1990	Access limitation may be required	-		6
1991	Access limitation may be required			2
1992	No fishing	300		1
1993	TAC	500		2
1994	TAC	500		7
1995	Precautionary TAC	500		6
1996	Precautionary TAC	500	1000	21
1997	Effort at present levels	700		35
1998	Effort at present levels	-		32
1999	Effort not to exceed that exerted in 1996–1997	-		10
2000	Effort not to exceed that of 1996–1998	-		11
2001	Effort not to exceed that of 1996–1999	-		1(
2002	Effort not to exceed that of 1996–2000	-		17
2003	Effort not to exceed that of 1996–2001	-		56
2004	Effort not to exceed that of 1996–2002	-		34
2005	Effort not to exceed that of 1996–2002	-		12
2006	Effort not to exceed that of 1996–2002	-		ç
2007	Effort not to exceed that of 1996–2002	-		2
2008	No fishing	0		
2009	No fishing	0		
2010	Same advice as last year	0		-
2011	Same advice as last year	0		3
2012	Same advice as last year	0		
2013	Same advice as last year	0		
2014	Same advice as last year	0		
2015	Same advice as last year	0		
2016	Same advice as last year	0		
2017	Precautionary approach	0		
2018	Precautionary approach	0		
2019	Precautionary approach	0		
2020	Precautionary approach	0		
2021	Precautionary approach	0		
2022	Precautionary approach	0		2
2023	Precautionary approach	78		11
2024	Precautionary approach	78		
2025	Precautionary approach ***	579		

* Prior to 1992 official landings are presented, thereafter ICES estimates are presented (catches on the Faroe Bank are considered to be taken only by Faroese and Norwegian vessels).

** Not applicable since 1997.

*** Based on average catch (2021–2023) instead of previous advice.

History of the catch and landings

Table 6Cod in Subdivision 5.b.2 (Faroe Bank). Catch distribution by fleet in 2023 as estimated by ICES. All weights are in
tonnes.

Catch	Landings	Discards	
1170 +	100% hooks and lines	Nagligibla	
1178 tonnes	1178 tonnes	Negligible	

There are no reported catches from the NEAFC regulatory areas.

Table 3	/
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Cod in Subdivision 5.b.2 (Faroe Bank). Nominal catches by country as officially reported to ICES. From 1992 catches by the Faroe Islands and Norway are used in the assessment. All weights are in tonnes.

Year	, Faroe Islands	Correction of Faroese catches in Subdivision 5.b.2	Norway	UK (E/W/NI)	UK (Scotland)	Total	ICES estimates
1986	1836		6		63	1905	1905
1987	3409		23		47	3479	3479
1988	2966		94		37	3097	3097
1989	1270		128		14	1412	1412
1990	289					289	289
1991	297					297	297
1992	122		32			154	154
1993	264		2			266	266
1994	717		8			725	725
1995	561		40			601	601
1996	2051		55			2106	2106
1997	3459		135			3594	3594
1998	3092		147			3239	3239
1999	1001		88			1089	1350
2000	*	1145	49			1194	1194
2001	1094	-65	51			1080	1080
2002	1840	-109	25			1756	1756
2003	5957	-353	72			5676	5676
2004	3607	-214	18			3411	3411
2005	1270	-75	37			1232	1232
2006	1005	-60	10			955	955
2007	471	-28	7			450	450
2008	231	-14	1			218	218
2009	81	-5	4			80	80
2010	111	-7	1			105	105
2011	393	-23				370	370
2012	115	-7	0			108	108
2013	40	-2				38	38
2014	40	-2	1			39	39
2015	26	-2	0			24	24
2016	19	-1	1			19	19
2017	14	-1	1			14	14
2018	33	-2				31	31
2019	74	-4				70	70
2020	55	-3	13			65	65
2021	63	-4	2			61	60
2022	213	-13				213	200
2023*	1243	-74	9			1252	1178

* No reported catch

**Preliminary

Summary of the assessment

Table 8

Cod in Subdivision 5.b.2 (Faroe Bank). Assessment summary. Biomass index, used in the application of the *rb* advice method (ICES, 2022) in kg/hour. Catches are in tonnes. Low and high index values are one standard deviation from the midpoint value.

Year		Total catch		
	Low	Midpoint	High	
1965				2341
1966				1909
1967				1569
1968				3871

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Maar		Biomass index		Tatalaatab
Year	Low	Midpoint	High	Total catch
1969				2457
1970				3002
1971				2079
1972				2168
1973				5101
1973				2068
1975				2036
1976				2258
1977				959
1978				4379
1979				1306
1980				1203
1981				1229
1982				2184
1983				2284
1984				2189
1985				2913
1986				1836
1987				3409
1988				2966
1989				1270
1990				289
1991				297
1992				154
1993				266
1994				725
1995				601
1996	230	310	390	2106
1997	310	450	590	3594
1998	290	390	490	3239
1999 2000	<u>112</u> 99	150 141	187 183	1001 1194
2000	240	290	350	1194
2001	240	350	430	1756
2002	132	170	210	5676
2004	61	73	85	3411
2005	48	62	76	1232
2006	25	29	34	955
2007	27	33	39	450
2008	26	31	36	218
2009	42	52	62	80
2010	35	42	49	105
2011 2012	54 26	65	76 42	370
2012	13.8	34 17.4	21	108 38
2013	13.8	26	36	39
2014	15.4	25	34	24
2016	3.6	5.4	7.2	19
2017	12.3	18.9	26	14
2018	16.7	21	26	31
2019	76	117	159	70

Year		Biomass index				
fedi	Low	Midpoint	High	Total catch		
2020	34	46	58	65		
2021	66	96	125	60		
2022	185	280	380	200		
2023	370	600	830	1178		
2024	240	500	770			

Sources and references

ICES 2022. Northwestern Working Group (NWWG). ICES Scientific Reports. Report. <u>https://doi.org/10.17895/ices.pub.19771381.v1</u>

ICES 2023a. Eleventh Workshop on the Development of Quantitative Assessment Methodologies based on LIFE-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XI). ICES Scientific Reports. Report. <u>https://doi.org/10.17895/ices.pub.22140260.v1</u>

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

ICES. 2024. Northwestern Working Group (NWWG). ICES Scientific Reports. To be added!

Download the stock assessment data and figures

Recommended citation: ICES. 2024. Cod (*Gadus morhua*) in Subdivision 5.b.2 (Faroe Bank). *In* Report of the ICES Advisory Committee, 2024. ICES Advice 2024, cod.27.5b2. <u>https://doi.org/10.17895/ices.advice.25019228</u>