

Cod (*Gadus morhua*) in Division 6.b (Rockall)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, catches should be no more than 14 tonnes in each of the years 2021, 2022, and 2023.

Note: This advice sheet is abbreviated due to the COVID-19 disruption. The previous advice issued for 2018–2020 is attached as Annex 1.

Stock development over time

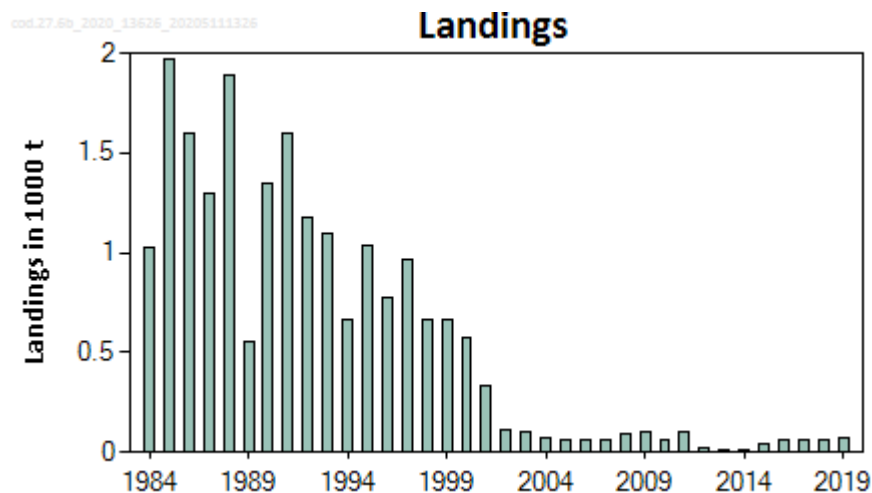


Figure 1 Cod in Division 6.b. Official landings (thousand tonnes) 1984–2012 and ICES estimated landings 2013–2019.

Stock and exploitation status

Table 1 Cod in Division 6.b. State of the stock and the fishery relative to reference points.

		Fishing pressure					Stock size			
		2017	2018	2019			2017	2018	2019	
Maximum sustainable yield	F_{MSY}	?	?	?	Unknown	$MSY B_{trigger}$?	?	?	Unknown
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Unknown	B_{pa}, B_{lim}	?	?	?	Unknown
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable

Catch scenarios

Information from the main fishery shows that the landings per unit of effort (lpue) has been fluctuating at a higher level since 2016, and that fishing effort has decreased and remained low since 2013 (Figure 2). A new survey also provides information indicating a recent increase in biomass (Figure 3). Therefore, the precautionary buffer was not applied.

Table 2 Cod in Division 6.b. The basis for the catch scenarios.

Recent advised catch		14 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Catch advice *		14 tonnes
Landings advice		Unknown
% advice change **		0

* Recent advised catch.

** Advice value for 2021 relative to the advice value for 2018.

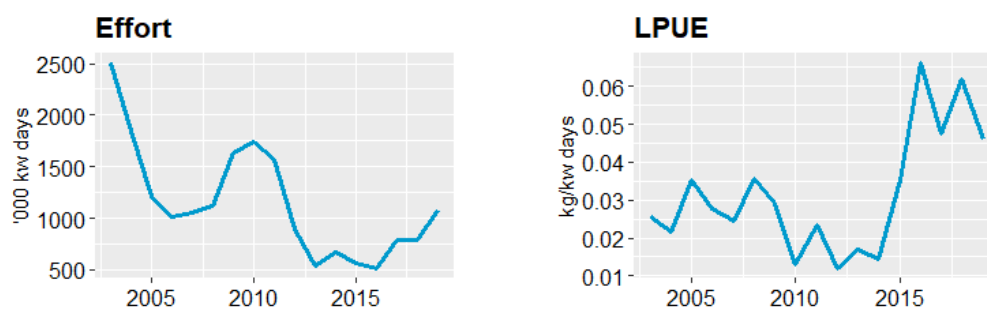


Figure 2 Cod in Division 6.b. Landings, effort, and lpue ($\text{kg kW}^{-1} \times \text{day}$) from the Scottish fleet.

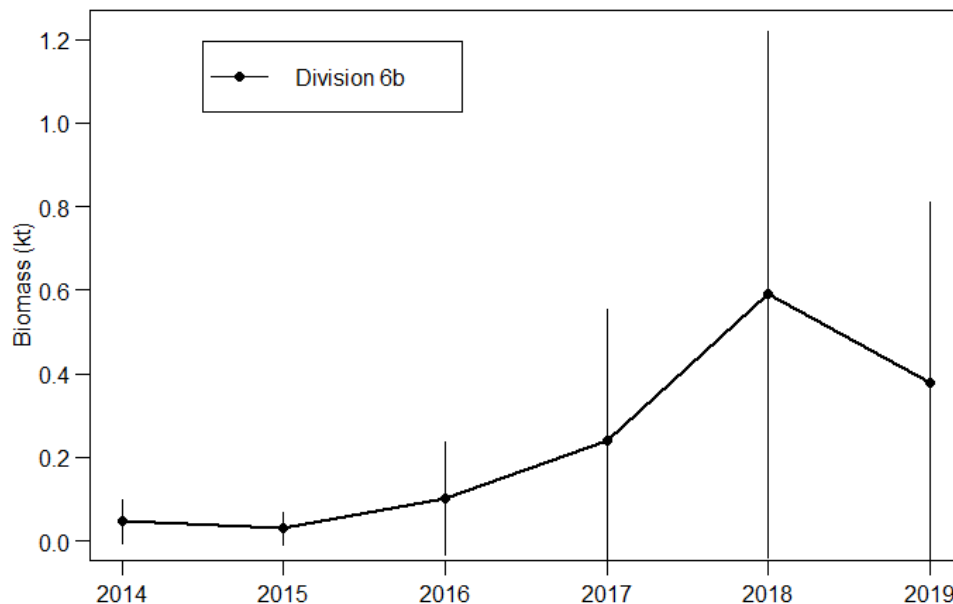


Figure 3 Cod in Division 6.b. Estimated biomass from data collected during the SIAMISS surveys in 2014–2019.

History of the advice, catch, and management

Table 3 Cod in Division 6.b. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	Landings taken from the NEAFC area	Total official landings
2001	No advice	-	3700 *		334
2002	No advice	-	4600 *		115
2003	No advice	-	1808 *		102
2004	No advice	-	848 *		75
2005	No advice	-	721 *		62
2006	No advice	-	613 *		58
2007	No advice	-	490 *		62
2008	No advice	-	402 *		96
2009	No advice	-	302 *		97
2010	No advice	-	80 **		61
2011	No advice	-	78 **		98
2012	No increase in catch.	-	78 **		23
2013	Reduce catch by 20%.	< 70	74 **		14
2014	Same advice as for 2013.	< 70	74 **		15
2015	Same advice as for 2013.	< 70	74 **	13	41
2016	Precautionary approach (catch should not exceed the average landings of 2012–2014).	≤ 17	74 **	3	62
2017	Precautionary approach (same advised catch value as provided for 2016).	≤ 17	74 **	3	57
2018	Precautionary approach (latest advised catch, PA buffer applied).	≤ 14	74 **	0 ***	64 ***
2019	Precautionary approach (same advised catch value as provided for 2018).	≤ 14	74 **	6 ***	66 ***
2020	Precautionary approach (same advised catch value as provided for 2018).	≤ 14	74 **		
2021	Precautionary approach. Latest advised catch.	≤ 14			
2022	Precautionary approach. Latest advised catch (as provided for 2021).	≤ 14			
2023	Precautionary approach. Latest advised catch (as provided for 2021).	≤ 14			

* Subarea 6; EU waters of Division 5b; EU and international waters of subareas 12 and 14.

** Division 6b; EU and international waters of Division 5.b west of 12° 00'W and of subareas 12 and 14.

*** Preliminary.

Sources and references

ICES. 2020. Working Group for the Celtic Seas Ecoregion (WGCSE). Draft report. ICES Scientific Reports. 2:40. xx pp. <http://doi.org/10.17895/ices.pub.5978>. Publication of the full report is expected end of 2020.

Recommended citation: ICES. 2020. Cod (*Gadus morhua*) in Division 6.b (Rockall). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, cod.27.6b. <https://doi.org/10.17895/ices.advice.5775>.

Annex 1

ICES Advice on fishing opportunities, catch, and effort
Celtic Seas and Oceanic Northeast Atlantic ecoregions
cod.27.6b

Cod (*Gadus morhua*) in Division 6.b (Rockall)

ICES stock advice

ICES advises that when the precautionary approach is applied, catches should be no more than 14 000 tonnes in each of the years 2018, 2019, and 2020. ICES cannot quantify the corresponding landings.

Stock development over time

Landings were on average over 1000 tonnes for most years earlier in the time-series and have declined to less than 100 tonnes since 2002. The available information is insufficient to evaluate the stock trends and exploitation but suggests that the stock may be depleted.

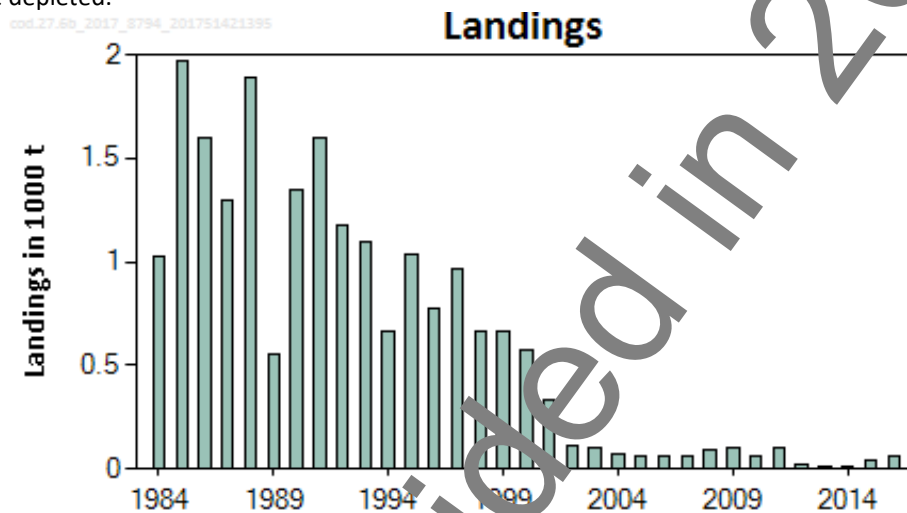


Figure 1 Cod in Division 6.b. Official landings (thousand tonnes).

Stock and exploitation status

Table 1 Cod in Division 6.b. State of the stock and fishery, relative to reference points.

		Fishing pressure				Stock size			
		2014	2015	2016		2015	2016	2017	
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	$MSY B_{trigger}$?	?	?
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	?	?	?
Management plan	F_M	—	—	—	Not applicable	SSB_{MGT}	—	—	—
Qualitative evaluation	-	?	?	?	Unknown	-	?	?	?

Catch options

The ICES framework for category 6 stocks was applied (ICES, 2012). For stocks without information on abundance or exploitation, ICES considers that a precautionary reduction of catches should be implemented unless there is ancillary information clearly indicating that the current level of exploitation is appropriate for the stock. The precautionary buffer was last applied in 2012 (for the 2013 advice), and with no new information available to support the current level of catches the precautionary buffer is applied for the 2018 advice.

Table 2 Cod in Division 6.b. The basis for the catch options.

Recent advised catch		17 tonnes
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Catch advice*		14 tonnes
Landings advice		Unknown

* recent advised catch × precautionary buffer

Basis of the advice

Table 3 Cod in Division 6.b. 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

There is limited information available on cod at Rockall and the stock quantity is unknown.

Issues relevant for the advice

Cod is a bycatch in fisheries at Rockall.

ICES cannot quantify the total catches due to uncertainty in the estimation of discard rates with limited sampling data only available for the last two years.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 4 Cod in Division 6.b. Basis of assessment and advice.

ICES stock data category	6.2.0 (ICES, 2016)
Assessment type	No assessment
Input data	Official landings statistics
Discards and bycatch	Discard rates are variable between fleets but estimates cannot be used to provide catch advice owing to their very high uncertainty.
Indicators	None
Other information	None
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

Information from stakeholders

Since 2011 there has been increasing coverage by the Scottish industry/science observer sampling scheme in divisions 4 and 6.

History of the advice, catch, and management

Table 5 Cod in Division 6.b. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	Landings taken from the NEAFC area	Official landings
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2013	Reduce catch by 20%	< 70	74**		14
2014	Same advice as for 2013	< 70	74*		15
2015	Same advice as for 2013	< 70	74**		41^
2016	Precautionary approach (catch should not exceed the average landings of 2012–2014)	≤ 17	74*	3^	63^
2017	Precautionary approach (same advised catch value as provided for 2016)	≤ 17	74**		
2018	Precautionary approach (latest advised catch, PA buffer applied)	≤ 14			
2019	Precautionary approach (same advised catch value as provided for 2018)	≤ 14			
2020	Precautionary approach (same advised catch value as provided for 2018)	≤ 14			

*Subarea 6: EU waters of Division 5b; EU and international waters of Subareas 12 and 14.

**Division 6b; EU and international waters of Division 5b west of 12° 00'W and of Subareas 12 and 14.

^Preliminary

History of the catch and landings

Table 6 Cod in Division 6.b. Catch distribution by fleet in 2016 as estimated by ICES.

Catch (2016)	Landings			Discards
74 tonnes	otter trawl 74%	longline 18%	other 8%	11 tonnes
	63 tonnes			

Table 7 Cod in Division 6.b. History of commercial catch and landings; both the official and ICES estimated values are presented by country. All weights are in tonnes.

Country	Faroe Islands	France	Germany	Ireland	Norway	Portugal	Russia	Spain	UK (E. & W. & N.I.)	UK (Scotland)	UK	Total
1984	18	9	-	-	373	-	-	241	161	21	-	1023
1985	-	17	3	-	202	-	-	1200	114	47	-	1973
1986	1	5	-	-	95	-	-	1219	93	18	-	1600
1987	-	7	-	-	130	-	-	808	69	284	-	1298
1988	31	2	3	-	195	-	-	1345	56	254	-	1886
1989	5	-	-	-	148	-	-	-	131	255	-	549
1990	-	-	-	400	119	-	-	64	8	758	-	1349
1991	-	-	126	236	312	-	-	70	23	829	-	1596
1992	-	-	2	235	199	-	-	-	2	714	-	1176
1993	1	-	-	472	199	-	-	-	103	322	-	1097
1994	-	-	-	280	120	-	-	-	25	236	-	661
1995	-	-	-	477	92	-	-	2	0	370	-	1031
1996	-	-	10	436	91	-	-	5	23	210	-	775
1997	-	-	22	153	55	5	-	1	20	706	-	962
1998	-	-	3	227	51	-	-	6	32	341	-	660
1999	-	-	11	148	85	-	-	4	22	389	-	659
2000	-	+	1	119	152	-	7	2	4	286	-	572
2001	-	-	-	40	89	-	26	1	2	176	-	334
2002	-	+	-	18	28	-	-	-	2	67	-	115
2003	-	+	-	11	25	-	-	6	3	57	-	102
2004	-	-	-	7	23	-	-	-	-	45	-	75
2005	-	-	-	12	7	-	-	-	-	43	-	62
2006	-	-	-	23	7	-	-	-	-	29	-	58
2007	-	-	-	24	12	-	-	-	-	26	-	62
2008	-	-	-	41	12	-	-	-	-	41	-	94
2009	3	-	-	20	25	-	1	-	-	48	-	97
2010	5	-	-	6	27	-	-	-	-	23	-	61
2011	+	-	-	12	49	-	-	-	-	37	-	98
2012	-	-	-	1	11	-	-	-	-	11	-	23
2013	-	-	-	2	3	-	-	-	-	9	-	14
2014	-	-	-	6	+	-	-	-	-	-	10	15
2015^	-	-	-	5	18	-	-	-	-	-	18	41
2016^	-	-	-	5	11	-	-	-	-	-	37	63

^Preliminary

Summary of the assessment

There is no assessment for cod in this area.

Sources and references

ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:68. 42 pp.

ICES. 2016. Advice based on Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.

ICES. 2017. Report of the Working Group for the Celtic Seas Ecoregion (WGCSE), 9–18 May 2017, ICES Headquarters, Copenhagen, Denmark. ICES CM 2017/ACOM