

Orange roughy (*Hoplostethus atlanticus*) in subareas 1–10, 12 and 14 (the Northeast Atlantic and adjacent waters)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, there should be zero catch in each of the years 2021–2024.

Note: This advice sheet is abbreviated due to the Covid-19 disruption. The previous advice issued for 2017–2020 is attached as Annex 1.

Stock development over time

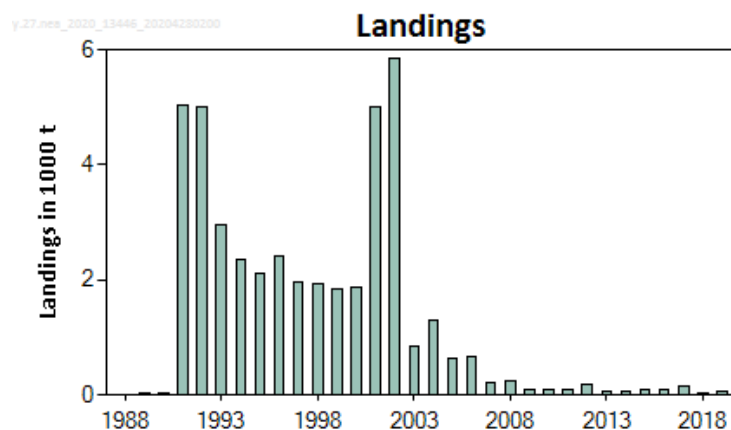


Figure 1 Orange roughy in the Northeast Atlantic. ICES estimates of international landings (in thousand tonnes).

Stock and exploitation status

Table 1 Orange roughy in the Northeast Atlantic. 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}	?	?	?	Undefined	$MSY B_{trigger}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	✗	✗	✗	Below possible reference points
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	✗	✗	✗	Very low

Catch scenarios

Table 2 Orange roughy in the Northeast Atlantic. For stocks in ICES categories 3–6, one catch option is provided.

Advised catches for 2017–2020, issued in 2016	0 tonnes
Discard rate	Unknown
Precautionary buffer	Not applied
Catch advice*	0 tonnes

* Equal to [Advised catches for 2017–2020].

Issues relevant for the advice

In subareas 6 and 7, this species is classified as Category 2 in the NEAFC categorization of deep-sea species/stocks, which implies that NEAFC requires measures stipulating that directed fisheries are not authorized and that bycatches should be minimized (NEAFC, 2016).

In Subarea 10, this species is classified as Category 1 in the NEAFC categorization of deep-sea species/stocks, which implies that NEAFC requires stock-specific management measures, since the entire, or a significant proportion of the catch, is taken in the NEAFC Regulatory Area (NEAFC, 2016).

History of the advice, catch, and management

Table 3 Orange roughy in the Northeast Atlantic. History of ICES advice, the agreed TAC, and ICES landings. Weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	EU TAC subareas 1–5, 8–12, and 14*	EU TAC Subarea 6**	EU TAC Subarea 7**	Total EU TAC subareas 1–12 and 14	ICES landings
2003	Exploitation strictly limited and populations closely monitored. No direct fishery in Subarea VI	-	-	88	1349	1437	859
2004	Biennial	-	-	88	1349	1437	1311
2005	No fishery unless accompanied by programmes to collect data	0	102	88	1148	1338	629
2006	Biennial	0	102	88	1148	1338	671
2007	No direct fishery, bycatch in mixed fishery as low as possible	0	44	51	193	288	212
2008	Biennial	0	30	34	130	194	250
2009	No direct fishery, bycatch in mixed fishery as low as possible	0	15	17	65	97	84
2010	Biennial	0	0	0	0	0	82
2011	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	108
2012	No new advice, same as 2011		0	0	0	0	185
2013	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	71
2014	No new advice, same as 2013	0	0	0	0	0	58
2015	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	90
2016	No new advice, same as 2015	0	0	0	0	0	94
2017	Precautionary approach (same value as advised catches for 2016)	0	0	0	0	0	150
2018	Precautionary approach (same value as advised catches for 2016)	0	0	0	0	0	30

Year	ICES advice	Predicted catch corresp. to advice	EU TAC subareas 1–5, 8–12, and 14*	EU TAC Subarea 6**	EU TAC Subarea 7**	Total EU TAC subareas 1–12 and 14	ICES landings
2019	Precautionary approach (same value as advised catches for 2016)	0	0	0	0	0	60
2020	Precautionary approach (same value as advised catches for 2016)	0	0	0	0	0	
2021	Precautionary approach	0					
2022	Precautionary approach (same value as advised catches for 2021)	0					
2023	Precautionary approach (same value as advised catches for 2021)	0					
2024	Precautionary approach (same value as advised catches for 2021)	0					

* Annual total catches of any contracting party not to exceed 150 tonnes in the Northeast Atlantic Fisheries Commission (NEAFC) Regulatory Area, excluding subareas 5, 6, and 7.

** No directed fishery in the NEAFC Regulatory Area of subareas 5, 6, and 7.

Table 4 Orange roughy in the Northeast Atlantic. Landings inside and outside the NEAFC Regulatory Area (RA) as estimated by ICES. Landings are in tonnes.

Year	Inside the NEAFC RA (tonnes)	Outside the NEAFC RA (tonnes)	Total landings (tonnes)	Proportion inside the NEAFC RA (%)
2014	48	0	48	100
2015	84	6	90	93
2016	93	1	94	99
2017	150	0	150	100
2018	30	0	30	100
2019	60	0	60	100

Summary of the assessment

There is no assessment for orange roughy in this area.

Sources and references

ICES. 2020. Working Group on the Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP). ICES Scientific Reports, 2:38. <http://doi.org/10.17895/ices.pub.6015>.

NEAFC. 2016. The NEAFC approach to conservation and management of deep-sea species and categorization of deep-sea species/stocks. Adopted at the 35th Annual Meeting, November 2016. <https://www.neafc.org/basictexts>.

Recommended citation: ICES. 2020. Orange roughy (*Hoplostethus atlanticus*) in subareas 1–10, 12, and 14 (the Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, ory.27.nea. <https://doi.org/10.17895/ices.advice.5767>.

9.3.40 Orange roughy (*Hoplostethus atlanticus*) in the Northeast Atlantic

ICES stock advice

ICES advises that when the precautionary approach is applied, there should be zero catch in each of the years 2017–2020.

Stock development over time

Total catches have been low since 2002. There have been no directed EU fisheries in the Northeast Atlantic since 2010.

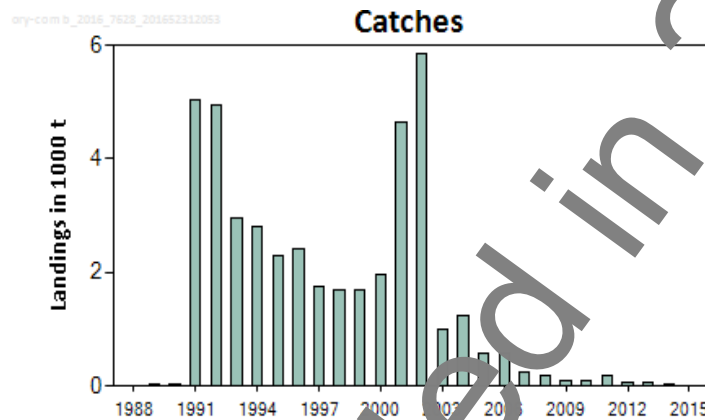


Figure 9.3.40.1 Orange roughy in the Northeast Atlantic. ICES estimates of international catches (in thousand tonnes).

Stock and exploitation status

Table 9.3.40.1 Orange roughy in the Northeast Atlantic. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size				
		2013	2014	2015	2013	2014	2015		
Maximum sustainable yield	F _{MSY}	?	?	?	MSY	?	?	?	Undefined
Precautionary approach	F _{pa} , F _{lim}	?	?	?	B _{trigger} , B _{pa} , B _{lim}	?	?	?	Undefined
Management plan	F _{MGT}	-	-	-	SSB _{MGT}	-	-	-	Not applicable
Qualitative evaluation	-	?	?	?		⊗	⊗	⊗	Below possible ref. points

Catch options

For this stock, recent catch advice has been for zero catch. ICES advises that when the precautionary approach is applied, catches should not increase (ICES, 2012). This corresponds to zero catch.

Table 9.3.40.2 Orange roughy in the Northeast Atlantic. For stocks in ICES categories 3–6, one catch option is provided.

Recent advised catches		0 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Catch advice		0 tonnes

Basis of the advice

Table 9.3.40.3 Orange roughy in the Northeast Atlantic. The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no management plan for orange roughy.

Quality of the assessment

There is no information available to conduct an assessment.

Issues relevant for the advice

Historical orange roughy CPUE data in Subarea 6 show a strong declining trend since the early 90s and it is presumed that the aggregations were fished out. Orange roughy fisheries in Subarea 7 exhibited a similar pattern to that in Subarea 6, suggesting sequential depletion, but it is not known if unfished aggregations remain in Subarea 7. There is insufficient information to evaluate the status of the stock in other areas.

Due to the closure of the fishery in subareas 6 and 7, limited data are available to evaluate the status of the stock. The Irish and Scottish deep-water trawl surveys provided information on the CPUE of juveniles, which was used for a qualitative assessment in 2010. The Irish survey was discontinued in 2009 and the Scottish survey only partially covers Division 6.a. Therefore, current monitoring programmes are insufficient to monitor the recovery of the stock in subareas 6 and 7. In order to evaluate the impact of any directed fishery on orange roughy populations, data would be required at the spatial resolution of single seamounts.

Reference points

No reference points have been established; however, an analysis indicated that potential sustainable F reference points for orange roughy in subareas 6 and 7 would be very low ($F = 0.04 - 0.06$) and similar to natural mortality.

Basis of the assessment

Table 9.3.40.4 Orange roughy in the Northeast Atlantic. The basis of the assessment.

ICES stock data category	6 (ICES, 2016a)
Assessment type	No assessment (ICES, 2016b)
Input data	Landings data
Discards and bycatch	Negligible
Indicators	None
Other information	Historical commercial CPUE and survey data
Working group	Working group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP)

Information from stakeholders

There is no available information.

History of the advice, catch, and management

Table 9.3.40.5 Orange roughy in the Northeast Atlantic. History of ICES advice, the agreed TAC, and official landings. Weights are in thousand tonnes.

Year	ICES advice	Predicted catch corresp. to advice	EU TAC Subareas 1–5, 8–12, and 14*	EU TAC Subarea 6**	EU TAC Subarea 7**	Total EU TAC Subareas 1–12 and 14	ICES landings
2003	Exploitation strictly limited and populations closely monitored. No direct fishery in Subarea VI	-	-	0.088	1.339	1.437	1.00
2004	Biennial	-	-	0.088	1.340	1.437	1.25
2005	No fishery unless accompanied by programmes to collect data	0	0.102	0.088	1.148	1.338	0.57
2006	Biennial	0	0.102	0.088	1.148	1.338	0.57
2007	No direct fishery, bycatch in mixed fishery as low as possible	0	0.044	0.051	0.193	0.288	0.26
2008	Biennial	0	0.03	0.034	0.13	0.194	0.20
2009	No direct fishery, bycatch in mixed fishery as low as possible	0	0.015	0.017	0.065	0.097	0.09
2010	Biennial	0	0	0	0	0	0.09
2011	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	0.17
2012	No new advice, same as 2011	0	0	0	0	0	0.07
2013	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	0.07
2014	No new advice, same as 2013	0	0	0	0	0	0.05
2015	No directed fisheries and measures to minimize bycatch	0	0	0	0	0	0.09
2016	No new advice, same as 2015	0	0	0	0	0	
2017	Precautionary approach: (same value as advised catches for 2016)	0					
2018	Precautionary approach (same value as advised catches for 2016)	0					
2019	Precautionary approach (same value as advised catches for 2015)	0					
2020	Precautionary approach (same value as advised catches for 2016)	0					

* Annual total catches of any contracting party not to exceed 150 tonnes in the North East Atlantic Fisheries Commission (NEAFC) Regulatory Area, excluding subareas 5, 6, and 7.

** No directed fishery in the NEAFC Regulatory Area of subareas 5, 6, and 7.

History of catch and landings

Table 9.3.40.6 Orange roughy in the Northeast Atlantic. Catch distribution by fleet in 2015 as estimated by ICES.

Total catch (2015)	Landings		Discards
	100% trawl fisheries	90 t	
0 t			0 t

Table 9.3.40.7 Orange roughy in the Northeast Atlantic. History of official landings (in tonnes) presented by each country participating in the fishery.

Year	UK (E & W)	Faroes	France	Iceland	Ireland	New Zealand	Norway	Portugal	Russia	UK (Scotl.)	Spain	Total
1988	0	0	0	0	0			0		0	0	0
1989	0	0	8	0	0	0	0	0	0	0	0	8
1990	0	0	39	0	0	0	0	0	0	0	0	39
1991	0	0	4956	65	0	0	0	0	0	0	0	5021
1992	0	25	4543	382	0	0	0	0	0	0	0	4950
1993	0	125	2106	717	0	1	1	0	0	0	0	2950
1994	0	750	1905	158	0	0	0	0	0	0	0	2813
1995	0	1238	1002	64	0	0	0	0	0	2	1	2307
1996	0	1349	1034	43	0	0	0	0	0	0	1	2427
1997	1	622	1016	79	0	0	0	0	0	0	23	1741
1998	0	522	1125	28	0	0	0	0	0	0	18	1693
1999	0	228	1386	14	0	0	0	0	0	0	54	1682
2000	35	500	1179	68	3	0	0	157	12	0	0	1954
2001	31	85	1199	19	2477	450	0	343		33	0	4637
2002	14	35	458	10	5244	0	0	0	0	74	0	5835
2003	0	178	516	0	310	0	0	0	0	0	0	1004
2004	0	542	471	28	209	0	0	0	0	0	0	1250
2005	0	212	254	9	96	0	0	0	0	0	0	571
2006	0	28	498	2	38	0	0	0	0	0	0	566
2007	0	71	158	0	28	0	0	0	0	0	0	257
2008	0	71	123	4	0	0	0	0	0	0	0	198
2009	0	61	20	0	0	0	0	4	0	0	0	85
2010	0	66	0	0	0	0	0	28	0	0	0	94
2011	0	171	0	4	0	0	0	0	0	0	0	175
2012	0	47	2	10	0	0	0	0	0	0	0	65
2013	0	12	1	0	0	0	0	0	0	0	0	67
2014		48	0	0	0	0	0	0	0	0	0	48
2015		84	6	0	0	0	0	0	0	0	0	90

Table 9.3.40.8 Orange roughy in the Northeast Atlantic. Landings inside and outside the NEAFC Regulatory Area (RA) as estimated by ICES. Landings in tonnes

Year	Inside the NEAFC RA	Outside the NEAFC RA	Total landings
2014	48	0	48
2015	84	6	90

Summary of the assessment

There is no assessment for orange roughy.

Sources and references

- ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:168. 42 pp.
- ICES. 2016a. General context of ICES advice. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 4, Section 1.2.
- ICES. 2016b. Report of the Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP), 20–27 April 2016, ICES Headquarters, Copenhagen. ICES CM 2016/ACOM:17.

Advice provided in 2016