

Roundnose grenadier (*Coryphaenoides rupestris*) in Division 3.a (Skagerrak and Kattegat)

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 and 2022.

Note: This advice sheet is abbreviated due to the Covid-19 disruption. The previous advice issued for 2019 and 2020 is attached as Annex 1.

Stock development over time

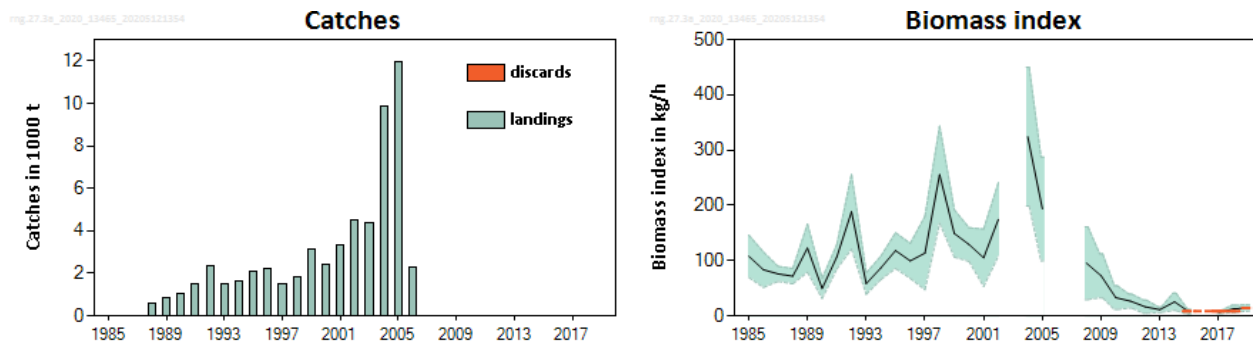


Figure 1 Roundnose grenadier in Division 3.a. Left: ICES landings and discards in thousand tonnes. Discards have only been reported since 2014. Recent landings and discards are very low (1–3 tonnes). Right: Average standardized biomass index. The orange horizontal lines indicate the average biomass indicator of the respective year range (last two and preceding three years) used to calculate the advice. Shaded areas of the biomass index indicate \pm one standard error.

Stock and exploitation status

Table 1 Roundnose grenadier in Division 3.a. 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	$MSY B_{trigger}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Unknown	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 Roundnose grenadier in Division 3.a. The basis for the catch scenarios.*

Index A (2018–2019)		13.73
Index B (2015–2017; 2016 is missing)		6.96
Index ratio (A/B)		1.97
Uncertainty cap	Applied	1.2
Advised catches for 2019 and 2020, issued in 2018		0 tonnes
Discard rate (2019)		0.38
Precautionary buffer	Not applicable	-
Catch advice**		0 tonnes
% advice change***		0%

* The figures in the table are rounded. Calculations were carried out with unrounded inputs and computed values may not match precisely when calculated using the rounded figures in the table.

** [Advised catches for 2019–2020] × [uncertainty cap].

*** Advice value for 2021–2022 relative to the advice value for 2019–2020.

Issues relevant for the advice

This stock is classified as Category 4 in the NEAFC categorization of deep-sea species/stocks, which implies that fisheries are primarily restricted to coastal state exclusive economic zones (EEZs). Therefore, management measures are not taken by NEAFC unless complementary to coastal state conservation and management measures (NEAFC, 2016).

History of the advice, catch, and management

Table 3 Roundnose grenadier in Division 3.a. History of ICES advice, the agreed TAC, and ICES landings. Weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	EU TAC Subarea 3	Norway TAC Subarea 3	ICES landings Division 3.a *
2003	Significant reduction in effort	-	1870	no TAC	4300
2004	Biennial	-		no TAC	9900
2005	Fishery not allowed to expand, unless proven to be sustainable	-	1590	no TAC	11900
2006	Biennial	-	1590	2700	2300
2007	50% reduction of effort compared to the level before the fishery expanded (1991–1999)	1000	850**	no TAC	1
2008	Biennial	1000	850	no TAC	< 0.1
2009	Constrain catches to the catch level before the expansion of the fishery (1988–1991)	1000	850	no TAC	2
2010	Biennial	1000	850	no TAC	1
2011	Same advice as previously	1000	850	no TAC	0
2012	No new advice, same as 2011		850	no TAC	1
2013	Catch should not increase unless there is evidence that this will be sustainable	< 1	680	no TAC	1
2014	No new advice, same as 2013	< 1	544	no TAC	1
2015	No targeted fishery and minimize bycatch	0	435	no TAC	1
2016	No new advice, same as 2015	0	348	no TAC	1
2017	Precautionary approach (same value as advised catches for 2016)	0	278	no TAC	1
2018	Precautionary approach (same value as advised catches for 2017)	0	223	no TAC	0.4
2019	Precautionary approach	0	50	no TAC	1
2020	Precautionary approach	0	50	no TAC	
2021	Precautionary approach	0			
2022	Precautionary approach	0			

* Since 2007 bycatch only.

** Directed fisheries prohibited since mid-2006 through an agreement between the EU and Norway.

Summary of the assessment

Table 4 Roundnose grenadier in Division 3.a. Assessment summary. Biomass index for roundnose grenadier from the Norwegian shrimp survey. Biomass index in $\text{kg} \times \text{h}^{-1}$, and high and low represent \pm one standard error.

Year	Biomass index ($\text{kg} \times \text{h}^{-1}$)	High	Low	Landings (tonnes)	Discards (tonnes)
1985	108	146	70		
1986	84	116	52		
1987	76	90	63		
1988	72	86	58	617	
1989	123	166	79	885	
1990	50	68	32	1067	
1991	107	129	85	1528	
1992	189	256	121	2328	
1993	59	78	39	1510	
1994	87	108	66	1633	
1995	118	151	86	2081	
1996	100	131	68	2213	
1997	114	180	47	1522	
1998	256	343	168	1819	
1999	149	192	106	3126	
2000	129	160	99	2404	
2001	105	157	53	3360	
2002	175	241	109	4482	
2003				4384	
2004	324	450	199	9890	
2005	194	287	100	11923	
2006				2265	
2007				1	
2008	96	161	30	0	
2009	73	113	33	2	
2010	33	55	12	1	
2011	27	39	14	0	
2012	17	29	5	1	
2013	11	16	7	1	
2014	26	41	10	1	0
2015	7	12	3	1	1
2016				1	1
2017	7	9	4	1	2
2018	13	19	6	0	3
2019	15	20	9	1	1

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>.

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