Norway lobster (*Nephrops norvegicus*) in Subarea 4, outside the functional units (North Sea)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 301 tonnes in each of the years 2021 and 2022. ICES cannot quantify the corresponding total catches.

Note: This advice sheet is abbreviated due to the Covid-19 disruption.The previous advice issued for 2018, 2019, and 2020 is attached as Annex 1.

Stock development over time

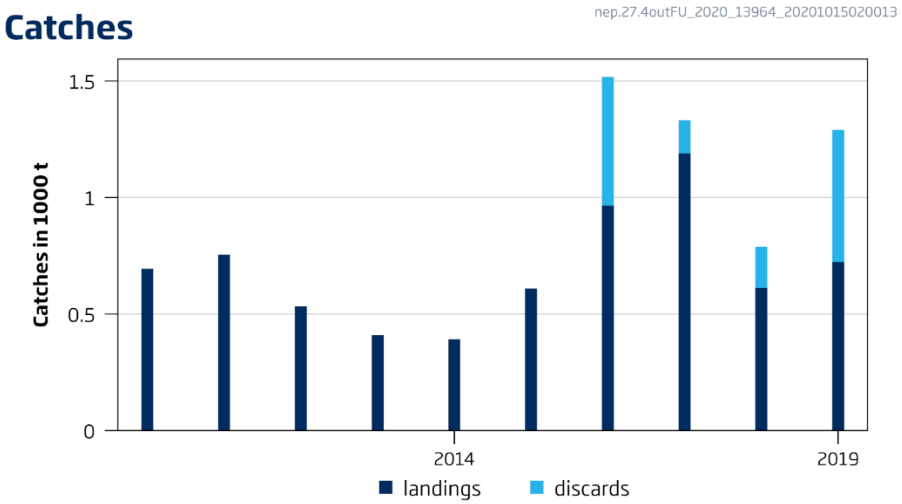

Figure 1 Norway lobster in Subarea 4, outside the functional units. ICES estimated landings and discards (tonnes). Discards are considered minimum estimates, as discard data are not available for all fleets.

Stock and exploitation status

Table 1 Norway lobster in Subarea 4, outside the functional units. State of the stock and the fishery relative to reference points.

	Fishing pressure					Stock size				
		2017	2018	2019			2018	2019	2020	
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

The ICES framework for category 5 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 ancillary information clearly indicates that the current level of exploitation is appropriate for the stock. The precautionary buffer has never been applied before and was therefore applied to the advice this year.

Table 2 Norway lobster in Subarea 4, outside the functional units. The basis for the catch scenarios.

Advised landings for 2018–2020		376 tonnes
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice		301 tonnes
% advice change **		−20%

* Advice value for 2021–2022 relative to the advice value for 2018–2020.

The change in advice (−20% compared to last year's advice) is due to the application of the precautionary buffer.

History of the advice, catch, and management

Table 3 Norway lobster in Subarea 4, outside the functional units. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Landings corresponding to advice	Catch corresponding to advice	ICES landings	ICES discards ^	Reported below minimum size (BMS) landings
2010		< 1500 *		695		
2011		< 1900 *		755		
2012		**		533		
2013		<820		409		
2014		<608		392	1	
2015		<409		610	1	
2016	Precautionary approach (decrease landings by 20% with respect to the 2012–2014 average)	≤ 376 ***		966	553	<< 1
2017	Precautionary approach (same value of wanted catch as advised for 2016)	≤ 376***		1190	142	0
2018	Precautionary approach (same value of wanted catch as advised for 2016)	≤ 376 ***		612	176	0
2019	Precautionary approach (same value of wanted catch as advised for 2016)	≤ 376 ***		724	567	0
2020	Precautionary approach (same value of wanted catch as advised for 2016)	≤ 376 ***				
2021	Precautionary approach	≤ 301				
2022	Precautionary approach	≤ 301				

* Including Devil's Hole (FU 34).
** No increase in catches.
*** Advised value refers to wanted catch.
^ Discards are considered minimum estimates as discard data are not available for all fleets.

Summary of the assessment

There is no assessment for Norway lobster 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. https://doi.org/10.17895/ices.pub.5322.

ICES. 2020. Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). ICES Scientific Reports, 2:61. 1140 pp. http://doi.org/10.17895/ices.pub.6092.

Recommended citation: ICES. 2020. Norway lobster (*Nephrops norvegicus*) in Subarea 4, outside the functional units (North Sea). *In* Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nep.27.4outFU. https://doi.org/10.17895/ices.advice.5777.

Annex 1

ICES Advice on fishing opportunities, catch, and effort
Greater North Sea Ecoregion
nep.27.4outFU

Published 30 June 2017
DOI: 10.17895/ices.pub.3163

Norway lobster (*Nephrops norvegicus*) in Subarea 4, outside the functional units (North Sea)

ICES stock advice

ICES advises that when the precautionary approach is applied, wanted catch should be no more than 376 tonnes in each of the years 2018, 2019, and 2020. ICES can not quantify the corresponding total catches.

Stock development over time

The state of *Nephrops* outside the functional units is unknown. Landings have been increasing since 2014.

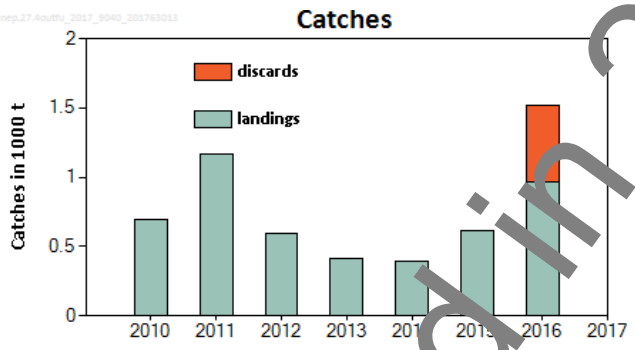

Figure 1 Norway lobster in Subarea 4, outside the functional units. ICES estimated landings (tonnes).

Stock and exploitation status

Table 1 Norway lobster in Subarea 4, outside the functional units. State of the stock and fishery relative to reference points.

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

Catch options

The ICES framework for category 5 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 applied in 2015 and was not applied again.

Table 2 Norway lobster in Subarea 4, outside the functional units. The basis for the catch options.

Advised wanted catch for 2016 and 2017		376 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Wanted catch advice		376 tonnes

* Advised wanted catch for 2016 and 2017.

Basis of the advice

Table 3 Norway lobster in Subarea 4, outside the functional units. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	ICES is not aware of any agreed precautionary management plan for Norway lobster in this area.

Quality of the assessment

Only landings are available in a consistent manner. Prior to 2016, the few discard data that are available show highly variable rates between métiers and years (20%–40%). Discard data were provided by Scotland and Netherlands in 2016. The discard biomass presented shows only reported discarding and is not raised to total landings because of the large-scale variability in discarding rates between those countries that have supplied data. As a consequence, ICES is unable to quantify the total catch corresponding to the advice.

Issues relevant for the advice

Norway lobster outside the FUs are not considered to constitute separate stocks but represent small patches of Norway lobster outside the identified stock units (FUs). The level of self-recruitment to these patches is unknown, although it is likely that there is some recruit spill-over from the major stock units.

There is a single TAC for all of ICES Subarea 4. Management should ensure that fishing opportunities are in line with the scale of the resource in each of the stocks.

From 2016 the EU landing obligation was applied to traps and trawl gears (80–99 mm mesh) fishing for Norway lobster in ICES Subarea 4. A *de minimis* exemption was made for animals below the 25 mm minimum conservation size (MCS), up to a maximum of 6% of total landings. Other gears and mesh sizes are not under the landing obligation.

Results from a North Sea mixed-fisheries analysis are presented in ICES (2017a). For 2018, assuming a strictly implemented discard ban (corresponding to the "Minimum" scenario), whiting would be the most limiting stock, being estimated to constrain 24 out of 42 fleet segments. Haddock is the second most limiting stock, constraining eight fleet segments. Additionally, if Norway lobster was managed by separate TACs for the individual functional units (FUs), Norway lobster in FU 6 would be considered the most limiting stock for ten fleet segments. Conversely, in the "Maximum" scenario, saithe and Eastern Channel plaice would be the least limiting for 20 and 11 fleet segments, respectively. Finally, if Norway lobster was managed by separate TACs, Norway lobster in FUs 7, 5, 33, and 4.non-FU would be the least limiting for nine, two, one, and two fleet segments, respectively. For those demersal fish stocks for which the F_{MSY} range is available, a "range" scenario is presented that minimizes the potential for TAC mismatches in 2018 within the F_{MSY} range. This scenario returns a fishing mortality by stock which, if used for setting single-stock fishing opportunities for 2018, may reduce the gap between the most and the least restrictive TACs, thus reducing the potential for quota over- and undershoot. This "range" scenario suggests that the potential for mixed-fisheries mismatch would be lowered with a 2018 TAC in the lower part of the F_{MSY} range for eastern English Channel plaice and saithe, and in the upper part of the range for cod and North Sea plaice. Norway lobster was not included in the 'range' scenario.

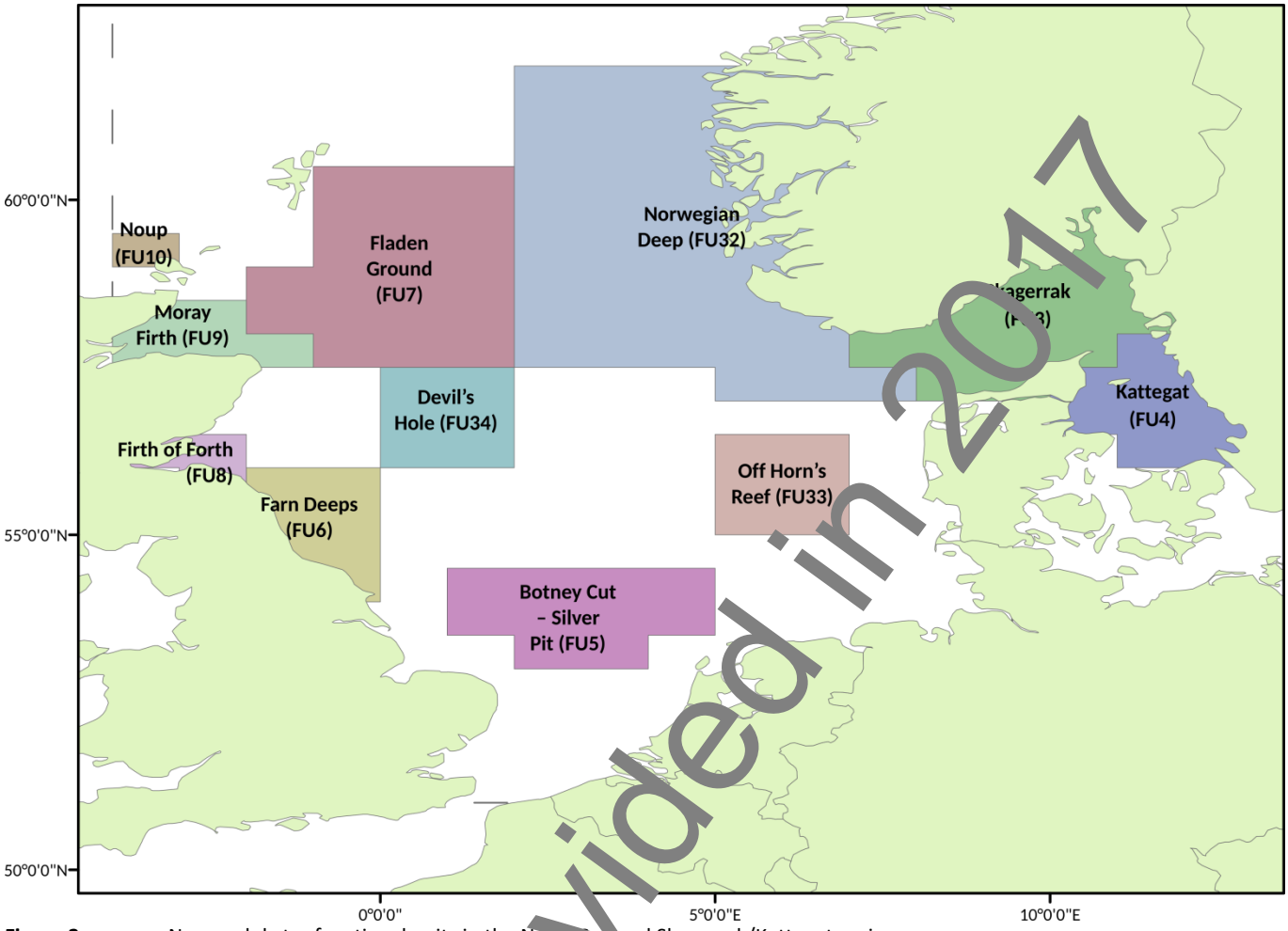

Figure 2 Norway lobster functional units in the North Sea and Skagerrak/Kattegat region.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 4 Norway lobster in Subarea 4, outside the functional units. Basis of the assessment and advice.

ICES stock data category	5 (ICES 2017).
Assessment type	No assessment.
Input data	International landings.
Discards, BMS, and	Incomplete international discards. Below minimum size (BMS) landings, where recorded, are included.
Indicators	None.
Other information	None.
Working group	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK)

Information from stakeholders

There is no additional available information.

History of the advice, catch, and management

Table 5 Norway lobster in Subarea 4, outside the functional units. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted landings corresponding to advice	Predicted catch corresponding to advice	TAC	ICES landings	ICES discards	Reported BMS landings
2010		< 1500 *			695		
2011		< 1900 *			1166		
2012		**			590		
2013		<820			409		
2014		<608			393		
2015		<409			6[illegible]		
2016	Precautionary approach (decrease landings by 20% with respect to the 2012–2014 average)	< 376 ***			966	552	<< 1
2017	Precautionary approach (same value of wanted catch as advised for 2016)	< 376***					
2018	Precautionary approach (advised wanted catch for 2016 and 2017)	≤ 376 ***					
2019	Precautionary approach (same value of wanted catch as advised for 2018)	≤ 376 ***					
2020	Precautionary approach (same value of wanted catch as advised for 2018)	≤ 376 ***					

* Including Devil's Hole (FU 34).
** No increase in catches.
*** Advised value refers to wanted catch.

History of the catch and landings

Table 6 Norway lobster in Subarea 4, outside the functional units. Catch distribution by fleet in 2016 as estimated by ICES.

Catch (2016)	Landings	Unwanted catch	BMS
1518 tonnes	OTB 100%	552 tonnes*	0.001 tonnes
	966 tonnes		

*Reported discarding is not raised to fleet level

Table 7 Norway lobster in Subarea 4, outside the functional units. History of commercial landings, ICES estimated values are presented by country. All weights are in tonnes.

Year	Belgium	Denmark	Germany	Netherlands	Sweden	UK (ENG)	UK (SCO)	Total
2011	411	53	208	137	0	36	322	1166
2012	5[illegible]	27	132	128	0	44	202	590
2013	31	8	84	152	0	57	78	409
2014	51	31	115	69	0	28	98	393
2015	1[illegible]	25	105	155	0	36	117	610
2016	[illegible]17	23	219	290	0	53	164	966

Summary of the assessment

There is no assessment for Norway lobster 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 basis. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.

ICES. 2017a. Report of the Working Group on Mixed-Fisheries Advice (WGMIXFISH-ADVICE), 22–26 May 2017, ICES Headquarters, Copenhagen, Denmark. ICES CM 2017/ACOM:18. In preparation.

ICES. 2017b. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK), 26 April–5 May 2017, ICES Headquarters, Copenhagen, Denmark. ICES CM 2017/ACOM:21. In preparation.