

Norway lobster (*Nephrops norvegicus*) in Division 9.a, Functional Unit 30 (Atlantic Iberian waters East and Gulf of Cadiz)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, catches in 2019 should be no more than 120 tonnes.

To ensure that the stock in Functional Unit 30 is exploited sustainably, management should be implemented at the functional unit level.

Stock development over time

Stock abundance has shown a small decrease in 2018. The harvest rate also decreased in 2017.

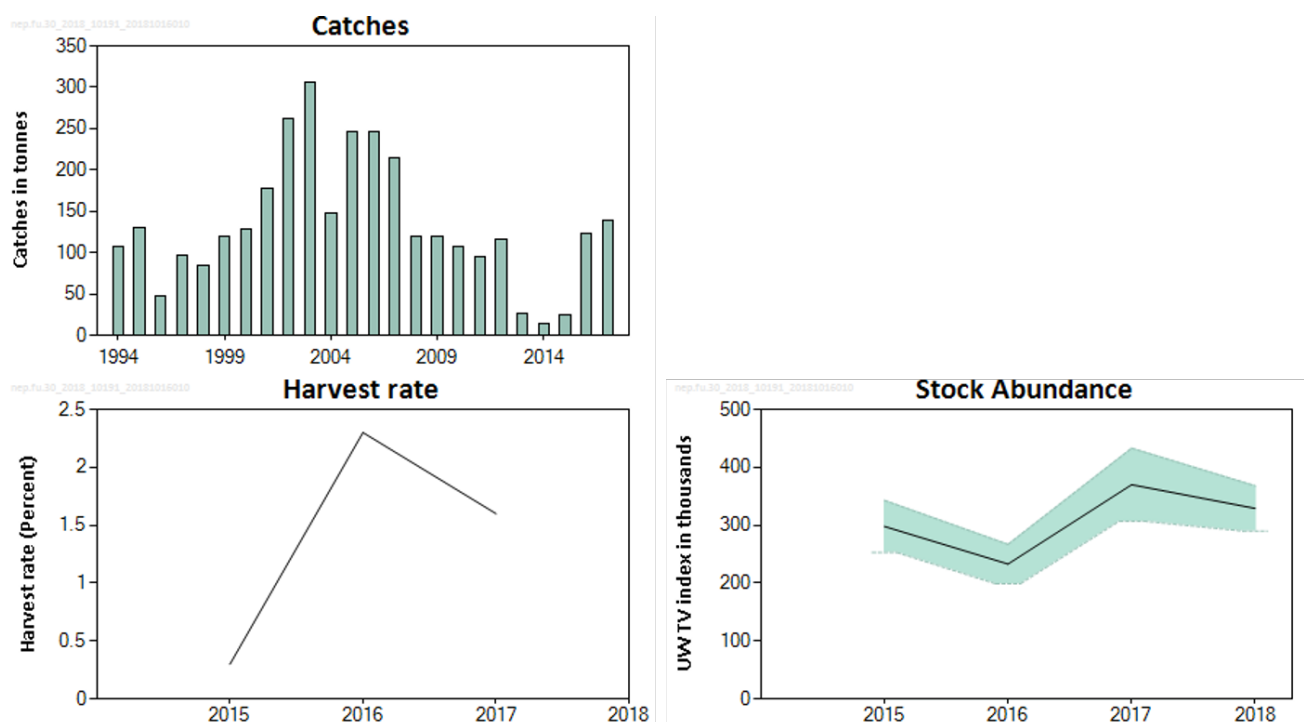


Figure 1 Norway lobster in Division 9.a, Functional Unit 30. Summary of the stock assessment. Upper left: Catches; lower left: Harvest rate (catch in numbers divided by total abundance); lower right: Stock abundance (from underwater TV survey, in millions, with 95% confidence intervals).

Stock and exploitation status

ICES cannot assess the stock and exploitation status relative to the maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined.

Table 1 Norway lobster in Division 9.a, Functional Unit 30. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size		
		2015	2016	2017	2016	2017	2018
Maximum sustainable yield	F_{MSY}	?	?	?	MSY	?	?
				Undefined	$B_{trigger}$?	?
						Undefined	
Precautionary approach	F_{pa}, F_{lim}	?	?	?	B_{pa}, B_{lim}	?	?
				Undefined		Undefined	
Management plan	F_{MGT}	—	—	—	B_{MGT}	—	—
				Not applicable		Not applicable	
Qualitative evaluation	-	✓	✓	✓	-	↘	↗
				Below possible reference points		Decreasing	

Catch scenarios

The ICES framework for category 4 Norway lobster stocks (ICES, 2012) was applied for this stock. Because specific reference points are not defined for FU 30, the ICES precautionary approach is used to provide advice.

As the stock appears to be very lightly exploited, the advice may be increased to a level corresponding to an acceptable harvest rate (HR), applying an uncertainty cap to restrict annual change to no more than 20%. The same advice as given in 2017 + 20% corresponds to a potential HR of 1.57%. This is well below the range of MSY harvest rates in almost all other FUs, which is considered conservative. Therefore, the precautionary buffer was not applied.

Table 2 Norway lobster in Division 9.a, Functional Unit 30. The basis for the catch scenarios.

Variable	Value	Notes
Stock abundance (2019)	329 million	UWTV survey 2018 (number of individuals)
Mean weight in wanted catch	23.29 g	Average 2016–2017
Mean weight in unwanted catch	-	Not relevant
Unwanted catch	0%	Negligible
Discard survival	-	Not relevant
Dead unwanted catch	0%	Negligible

Table 3 Norway lobster in Division 9.a, Functional Unit 30. Annual catch scenarios for 2018. All weights are in tonnes.

Basis	Total catch	Wanted catch*	Unwanted catch^ *	Harvest rate	% Advice change **
ICES advice basis					
Precautionary approach (advice for 2018 + 20%)	120	120	0	1.57	20
Other scenarios					
F ₂₀₁₇	123	123	0	1.61	23

^ Based on negligible discarding during observer trips.

* “Wanted” and “unwanted” catch are used to describe Norway lobster that would be landed and discarded in the absence of the EU landing obligation.

** Advice value for 2019 relative to the advice value for 2018.

The advice for 2019 is 20% higher compared to the advice for 2018 because a higher harvest rate was applied.

Basis of the advice

Table 4 Norway lobster in Division 9.a, Functional Unit 30. The basis of the advice.

Advice basis	ICES precautionary approach
Management plan	The EU has proposed a multiannual management plan for the Western Waters, which is not yet finalized (EU, 2018). The recovery plan for southern hake and <i>Nephrops</i> that was agreed by the EU in 2005 (EU, 2005) does not apply to FU 30 because a national management plan for the Cádiz bottom trawl fishery has been in place since before 2005 (BOE, 2016).

Quality of the assessment

UWTV surveys for the assessment began in 2015 and are considered appropriate (ICES, 2016).

The mean weight in 2016 and 2017 remained stable and were considered representative of the landings. The average of 2016 and 2017 data was used in the calculations of the catch advice.

In the assessment conducted in 2017, because of the restrictions imposed on the fishery during the years 2013–2015, the harvest rate was calculated as the average catch numbers in 2010–2012 divided by the average UWTV abundance estimates from 2015–2017. The corresponding harvest rate is 1.16%. In this year’s advice, the uncertainty cap was applied, resulting in an harvest rate of 1.57%.

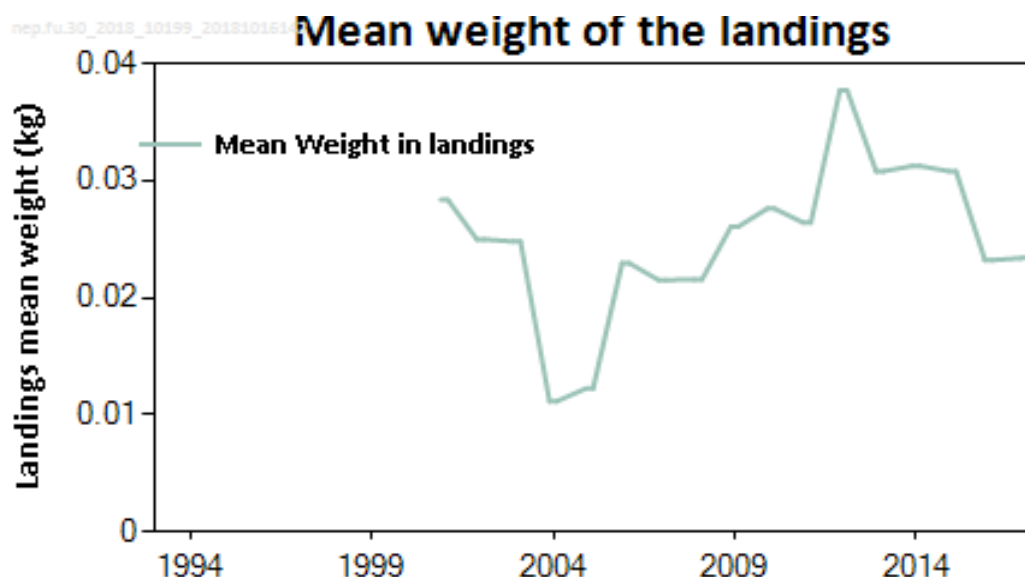


Figure 2 Norway lobster in Division 9.a, Functional Unit 30. Mean weight in the commercial landings.

Issues relevant for the advice

Misreporting has been quantified since 2016. Observed misreporting is substantial (around 260% of official landings; Table 8) and included in the assessment. Total catches in recent years are above the ICES advice for this functional unit.

A single TAC covers the entire ICES subareas 9 and 10 and EU waters of CECAF 34.1.1. Management should be implemented at the functional unit level to ensure that fishing opportunities are in line with the scale of the resource and corresponding MSY approach for each of the stocks.

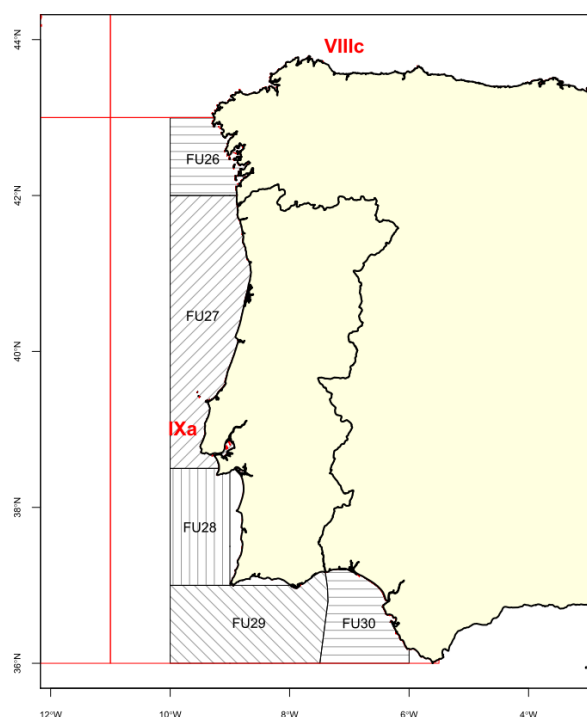


Figure 3 Norway lobster in Division 9.a, Functional Unit 30. Map of functional units.

Reference points

No reference points have been defined for this stock.

Basis of the assessment

Table 5 Norway lobster in Division 9.a, Functional Unit 30. Basis of the assessment and advice.

ICES stock data category	4 (ICES, 2018a)
Assessment type	Underwater TV survey (ICES, 2018b).
Input data	Survey index (UWTV-FU30, 2015–2018); commercial catches (Spanish 1994–2017 and Portuguese landings 2003–2017).
Discards and bycatch	Not included and considered negligible.
Indicators	One abundance survey index (SPGF-cspr/WIBTS-Q1, 1993–2017), mean length in commercial catches (2001–2017). One commercial index (Directed <i>Nephrops</i> Gulf of Cadiz bottom trawl fleet, 1994–2017).
Other information	This stock was last benchmarked in 2016 (ICES, 2016).
Working group	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion (WGBIE)

Information from stakeholders

No additional information is available for this stock.

History of the advice, catch, and management

Table 6 Norway lobster in Division 9.a, Functional Unit 30. ICES advice, TAC, and landings. All weights are tonnes.

Year	ICES advice	Catches corresponding to advice	AgreedTAC *	ICES landings
2003	Catch at the lowest recent level	< 50	600	307
2004	Catch at the lowest recent level	< 50	600	147
2005	Catch at the lowest recent level	< 50	540	246
2006	Catch at the lowest recent level	< 50	486	245
2007	Catch at the lowest recent level	< 50	437	214
2008	Catch at the lowest recent level	< 50	415	120
2009	Recent average catches (2005–2007)	< 200	374	120
2010	No new advice, same as for 2009	< 200	337	107
2011	See scenarios	-	303	96
2012	Reduce catch	-	273	116
2013	Reduce catch by 20%	90	243	26
2014	No new advice, same as for 2013	90	221	15
2015	Increase catch by no more than 20%	95	254	25
2016	No new advice, same as for 2015	95	320	124
2017	Precautionary approach	≤ 76	336	140
2018	Precautionary approach	≤ 100	381	
2019	Precautionary approach	≤ 120		

* Subareas 9 and 10; EU waters of CECAF 34.1.1.

History of the catch and landings

Table 7 Norway lobster in Division 9.a, Functional Unit 30. Catch distribution by fleet in 2017 as estimated by ICES. All weights are in tonnes.

Catch (2017)	Landings	Discards
140	Bottom trawl 100%	Discarding is considered to be negligible
	140	

Table 8 Norway lobster in Division 9.a, Functional Unit 30. History of catch and landings; both the official and ICES estimated values are presented by country. All weights are in tonnes.

Year	Official landings		Total official landings	Misreported landings	ICES estimated catch
	Spain*	Portugal			
1994	108		108		108
1995	131		131		131
1996	49		49		49
1997	97		97		97
1998	85		85		85
1999	120		120		120
2000	129		129		129
2001	178		178		178
2002	262		262		262
2003	303	4	307		307
2004	143	4	147		147
2005	243	3	246		246
2006	242	4	246		246
2007	211	4	215		215
2008	117	3	120		120
2009	117	2	119		119
2010	106	1	107		107
2011	93	3	96		96
2012	115	1	116		116
2013	26	< 1	27		27
2014	14	< 1	15		15
2015	25	< 1	25		25
2016	35	< 1	35	89	124
2017	38	< 1	38	101	140

* Landings from the port of Ayamonte are included since 2002.

Summary of the assessment

Table 9 Norway lobster in Division 9.a, Functional Unit 30. Assessment summary.

Year	Stock abundance	High	Low	Total catch	Harvest rate	Landings mean weight	Discard* mean weight	Discard* rate	Dead discard* rate
	millions			tonnes	%	kg	%		
1994				108					
1995				131					
1996				49					
1997				97					
1998				85					
1999				120					
2000				129					
2001				178		0.028			
2002				262		0.025			
2003				307		0.025			
2004				147		0.011			
2005				246		0.012			
2006				245		0.023			
2007				214		0.022			
2008				120		0.022			
2009				119		0.026			
2010				107		0.028			
2011				96		0.026			
2012				116		0.038			
2013				27		0.031			
2014				15		0.031			
2015	298	343	253	25	0.30	0.031	NA	0	0

Year	Stock abundance	High	Low	Total catch	Harvest rate	Landings mean weight	Discard* mean weight	Discard* rate	Dead discard* rate
	millions			tonnes	%	kg		%	
2016	233	267	199	124	2.3	0.023	NA	0	0
2017	370	433	307	140	1.60	0.023	NA	0	0
2018	329	368	290						

* Discard numbers are considered to be negligible and are not included in the assessment.

Sources and references

BOE. 2016. Orden AAA/1406/2016, de 18 de agosto, por la que se establece un Plan de gestión para los buques de los censos del Caladero Nacional del Golfo de Cádiz. BOE 26/08/2016: 61638–61656.

EU. 2005. COUNCIL REGULATION (EC) No 2166/2005 of 20 December 2005 establishing measures for the recovery of the Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian peninsula and amending Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. 28.12.2005. L 345: 5–10.

EU. 2018. Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a multiannual plan for fish stocks in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulation (EU) 2016/1139 establishing a multiannual plan for the Baltic Sea, and repealing Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) 509/2007 and (EC) 1300/2008. COM/2018/0149 final. 30 pp. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018PC0149&from=EN>.

ICES. 2009. Report of the Benchmark Workshop on *Nephrops* (WKNEPH), 2–6 March 2009, Aberdeen, UK. ICES CM 2009/ACOM:33. 156 pp.

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. Report of the Benchmark Workshop on *Nephrops* (*Nephrops norvegicus*) (WKNEP), 24–28 October 2016, Cadiz, Spain. ICES CM 2016/ACOM:38. 221 pp.

ICES. 2018a. Advice basis. In Report of the ICES Advisory Committee, 2018. ICES Advice 2018, Book 1, Section 1.2. <https://doi.org/10.17895/ices.pub.4503>.

ICES. 2018b. Report of the Working Group for the Bay of Biscay and the Iberian Waters Ecoregion (WGBIE), 3–10 May 2018, ICES HQ, Copenhagen, Denmark. ICES CM 2018/ACOM:12. 569 pp.