

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

ICES stock advice

ICES advises that when the precautionary approach is applied, catches should be no more than 76 tonnes in 2017.

To protect the stock in this functional unit, ICES advises that management should be implemented at the functional unit level.

Stock development over time

The CPUE index has been variable since 1998 with no clear trends. Catches in the last three years have been low because of a three-year sanction applied for exceeding the quota in 2012. The mean size of individuals in the catch has been increasing since 2005.

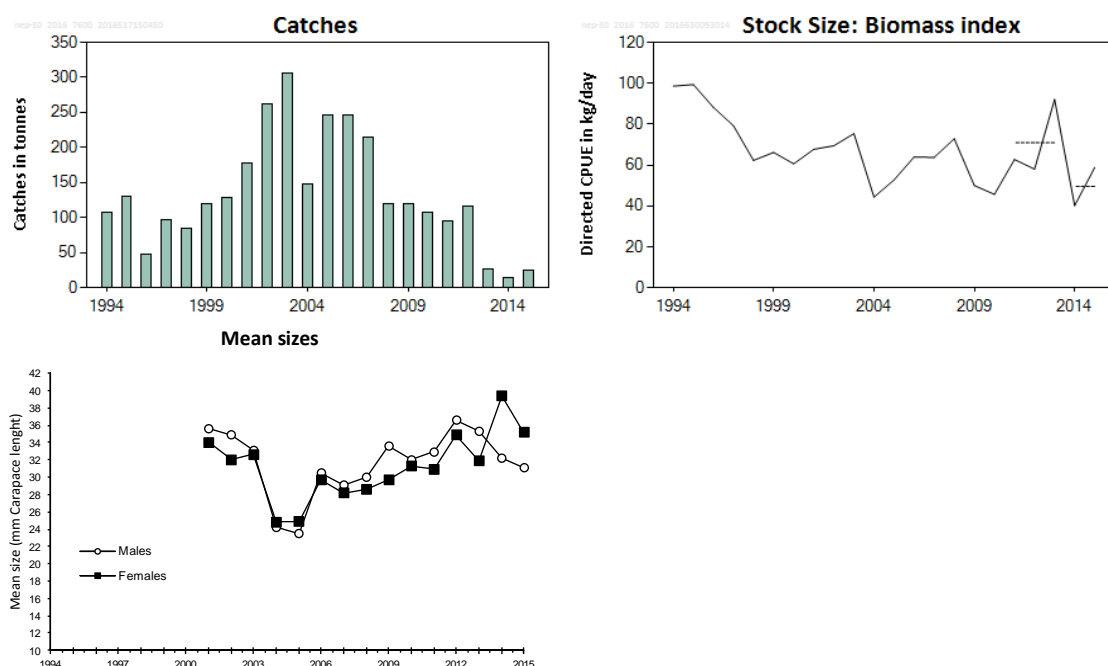


Figure 7.3.27.1 Norway lobster in Division 9.a, Functional Unit (FU) 30. Left: Official landings. Right: Stock size indicator, CPUE. Dashed lines denote the average of the respective year range. Lower left: mean size of males and females from the commercial catches.

Stock and exploitation status

Table 7.3.27.1 Norway lobster in Division 9.a, FU 30. State of the stock and fishery relative to reference points. The state of the stock evaluation is based on reference point proxies (ICES, 2016a, 2016b) for 2013 and 2014, and no updated analysis is available for 2015.

		Fishing pressure			Stock size		
		2013	2014	2015	2013	2014	2015
Maximum sustainable yield	$F_{MSYproxy}$	✓	✓	⓪ Unknown	$MSY B_{trigger}$	⓪	⓪ Undefined
Precautionary approach	F_{pa}, F_{lim}	✓	✓	⓪ Unknown	B_{pa}, B_{lim}	⓪	⓪ Undefined
Management plan	F_{MGT}	-	-	- Not applicable	SSB_{MGT}	-	- Not applicable
Qualitative evaluation						↗	↘ Stable

Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The one commercial directed *Nephrops* Gulf of Cadiz CPUE was used as the index of stock development. The advice is based on a comparison of the two latest index values (index A) with the three preceding values (index B), multiplied by the recent advised catch.

The index is estimated to have decreased by more than 20% and thus the uncertainty cap was applied. Although stock size is unknown, the fishing mortality was estimated to be below the MSY reference proxy in the evaluation conducted by (ICES, 2016b), with data until 2014. Additionally, fishing effort has decreased substantially since the mid 2000s (Figure 7.3.27.2). Therefore, no additional precautionary buffer was applied.

Discarding is negligible.

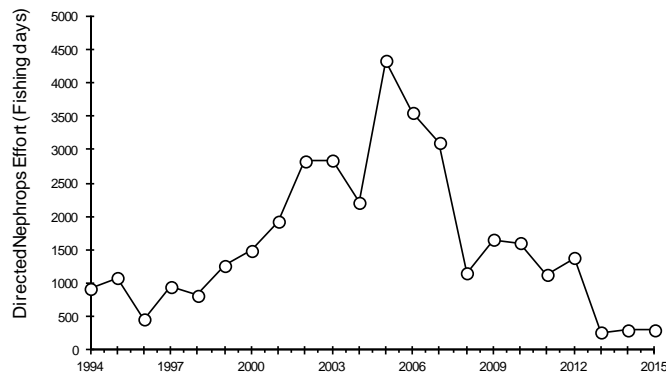


Figure 7.3.27.2 Norway lobster in Division 9.a, Functional Unit (FU) 30. Directed effort in the Norway lobster fishery in the Gulf of Cádiz (FU 30).

Table 7.3.27.2 Norway lobster in Division 9.a, FU 30. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2014-2015)	49.4 kg/Fishing days	
Index B (2011-2013)	70.9 kg/Fishing days	
Index ratio (A/B)	0.70	
Uncertainty cap	Applied	0.80
Recent advised catch for 2016	95 tonnes	
Discard rate	Negligible	
Precautionary buffer	Not applied	-
Catch advice*	76 tonnes	

*[recent advice x cap]

Basis of the advice

Table 7.3.27.3 Norway lobster in Division 9.a, FU 30. The basis of the advice.

Advice basis	Precautionary approach
Management plan	A recovery plan for southern hake and Norway lobster was agreed by the EU in 2005 (EU, 2005, Appendix 7.3.7). This plan is based on precautionary reference points for southern hake that are no longer appropriate.

Quality of the assessment

There is no information to present for this stock.

Issues relevant for the advice

ICES advises that the management area should be consistent with the assessment area (Figure 7.3.27.3).

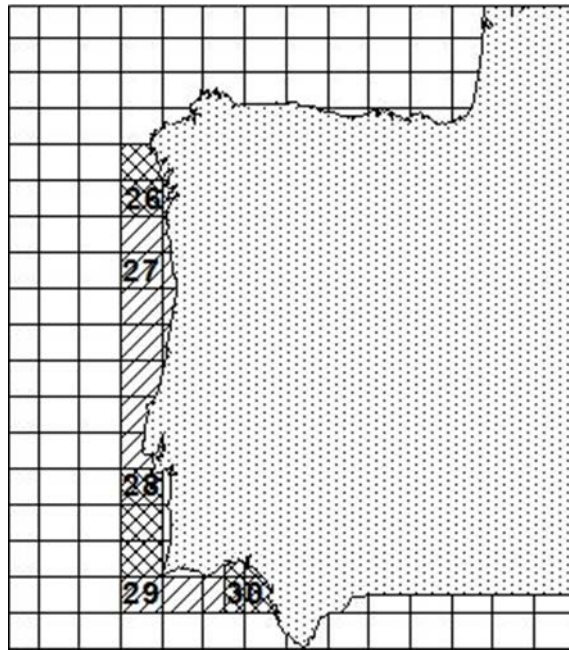


Figure 7.3.27.3 Norway lobster in Division 9.a, FU 30. Map of functional units.

Reference points

Table 7.3.27.4 Norway lobster in Division 9.a, FU 30. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	Not defined		
	$F_{MSY proxy}$	0.36 males; 0.63 females	$F_{0.1}$ from length-based analysis estimated using the mean-length Z method, assuming knife-edge length selection.	ICES (2016b)
Precautionary approach	B_{lim}	Not defined		
	B_{pa}	Not defined		
	F_{lim}	Not defined		
	F_{pa}	Not defined		
Management plan	SSB_{MGT}	Not defined		
	F_{MGT}	Not defined		

Basis of the assessment

Table 7.3.27.5 Norway lobster in Division 9.a, FU 30. The basis of the assessment.

ICES stock data category	3 (ICES, 2016c)
Assessment type	Trends from commercial CPUE.
Input data	Commercial catches (Spanish 1994–2015 and Portuguese landings 2003–2015); one commercial index (Directed <i>Nephrops</i> Gulf of Cadiz bottom trawl fleet, 1994–2015).
Discards and bycatch	Not included and considered negligible.
Indicators	One abundance survey index (SPGF-cspr/WIBTS-Q1, 1993–2016), mean length in commercial catches (2001–2015).
Other information	Landings were revised to include Ayamonte port since 2002. A benchmark is planned for October 2016.
Working group	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion (WGBIE)

Information from stakeholders

There is no available information.

History of the advice, catch, and management

Table 7.3.27.6 Norway lobster in Division 9.a, FU 30. History of ICES advice, the agreed TAC, and ICES estimates of landings. All weights are in thousand tonnes.

Year	ICES advice	Predicted catches correspond. to advice	AgreedTAC *	ICES landings
2003	Catch at the lowest recent level	< 0.05	0.600	0.307
2004	Catch at the lowest recent level	< 0.05	0.600	0.147
2005	Catch at the lowest recent level	< 0.05	0.540	0.246
2006	Catch at the lowest recent level	< 0.05	0.486	0.245
2007	Catch at the lowest recent level	< 0.05	0.437	0.214
2008	Catch at the lowest recent level	< 0.05	0.415	0.120
2009	Recent average catches (2005–2007)	< 0.20	0.374	0.120
2010	No new advice, same as for 2009	< 0.20	0.337	0.107
2011	See scenarios	-	0.303	0.096
2012	Reduce catch	-	0.273	0.116
2013	Reduce catch by 20%	0.09	0.243	0.026
2014	No new advice, same as for 2013	0.09	0.221	0.015
2015	Increase catch by no more than 20%	0.095	0.254	0.025
2016	No new advice, same as for 2015	0.095	0.320	
2017	Precautionary approach	≤ 0.076		

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

History of catch and landings

Table 7.3.27.7 Norway lobster in Division 9.a, FU 30. Catch distribution by fleet in 2015 as estimated by ICES.

Dead removals (2015)	Landings	Discards
25 t	100% bottom trawl	Discarding is negligible
	25 t	

Table 7.3.27.8 Norway lobster in Division 9.a, FU 30. History of official catch and landings. All weights are in tonnes.

Year	Official landings		
	Spain*	Portugal	Total
1994	108		108
1995	131		131
1996	49		49
1997	97		97

Year	Official landings		
	Spain*	Portugal	Total
1998	85		85
1999	120		120
2000	129		129
2001	178		178
2002	262		262
2003	303	4	307
2004	143	4	147
2005	243	3	246
2006	242	4	246
2007	211	4	215
2008	117	3	120
2009	117	2	119
2010	106	1	107
2011	93	3	96
2012	115	1	116
2013	26	< 1	27
2014	14	< 1	15
2015	25	< 1	25

* Ayamonte port landings included since 2002.

Summary of the assessment

Table 7.3.27.9 Norway lobster in Division 9.a, FU 30. Assessment summary.

Year	Catch (tonnes)	Directed <i>Nephrops</i> CPUE (kg [fishing days] ⁻¹)	Mean sizes commercial catches males (CL mm)	Mean sizes commercial catches females (CL mm)
1994	108	98.6		
1995	131	99.4		
1996	49	88.2		
1997	97	79.2		
1998	85	62.3		
1999	120	66.2		
2000	129	60.6		
2001	178	67.7	35.6	34
2002	262	69.4	34.9	32
2003	307	75.4	33.1	32.6
2004	147	44.3	24.2	24.8
2005	246	52.7	23.5	24.9
2006	246	64.0	30.5	29.7
2007	215	63.7	29.1	28.2
2008	120	72.9	30	28.6
2009	119	50.0	33.6	29.7
2010	107	45.6	32	31.3
2011	96	62.7	32.9	30.9
2012	116	58	36.6	34.9
2013	27	92.1	35.3	31.9
2014	15	40.1	32.2	39.4
2015	25	58.8	31.1	35.2

Sources and references

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. Official Journal of the European Union, L 345/5.

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