

Norway lobster (*Nephrops norvegicus*) in divisions 7.g and 7.f, Functional Unit 22 (Celtic Sea, Bristol Channel)

ICES advice on fishing opportunities

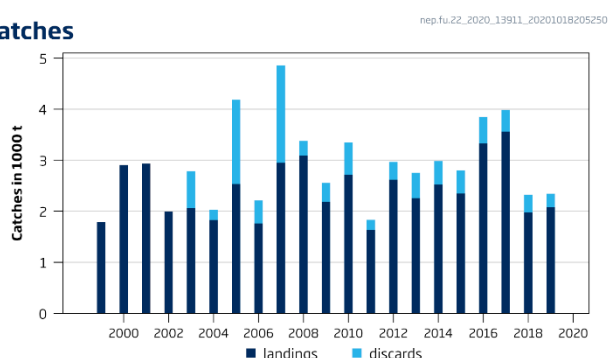
ICES advises that when the EU multiannual plan (MAP) for Western Waters and adjacent waters is applied, catches in 2021 that correspond to the F ranges in the MAP are between 1238 tonnes and 1560 tonnes, assuming recent discard rates. The entire range is considered precautionary when applying the ICES advice rule.

To ensure that the stock in Functional Unit (FU) 22 is exploited sustainably, management should be implemented at the functional unit level.

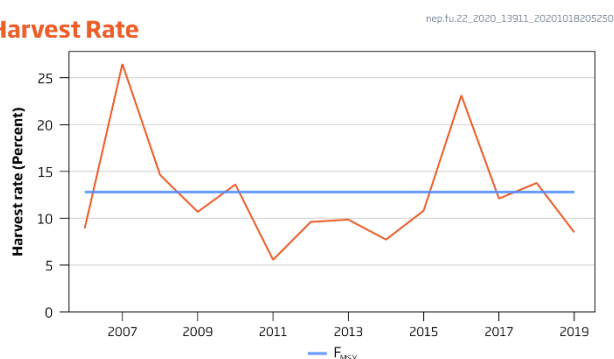
Note: This advice sheet is abbreviated due to the COVID-19 disruption. The previous advice issued for 2020 is attached as Annex 1.

Stock development over time

Catches



Harvest Rate



Stock abundance

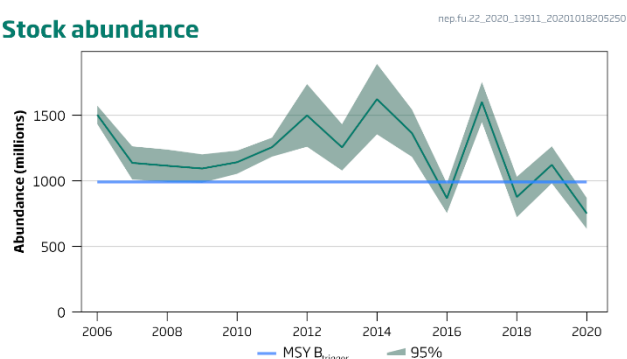


Figure 1 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Summary of the stock assessment. Catches (discard data only available from 2003), harvest rate (sum of landings and dead discards in numbers, divided by stock abundance), and stock abundance (underwater TV survey).

Stock and exploitation status

Table 1 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. 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}	✓	✗	✓ Below	MSY	✗	✓	✗ Below trigger
Precautionary approach	F_{pa}, F_{lim}	✓	?	✓ Below possible reference points	B_{pa}, B_{lim}	?	✓	? Undefined
Management plan	F_{MGT}	✓	✗	✓ Below the range	B_{MGT}	✗	✓	✗ Below trigger

Catch scenarios

The latest estimate of stock abundance is below MSY $B_{trigger}$ (990 million). The ICES maximum sustainable yield (MSY) approach states that under such conditions, the F_{MSY} harvest rate (12.8%) for FU 22 should be reduced by multiplying it by the ratio of current abundance to MSY $B_{trigger}$. This corresponds to a harvest rate of $12.8 \times (750/990) = 9.7\%$ for the advice in 2021.

Table 2 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. The basis for the catch advice and scenarios.

Variable	Value	Notes
Stock abundance (2021)	750	UWTV survey 2020; number of individuals in million
Mean weight in projected landings	22.5	Average 2017–2019; in grammes
Mean weight in projected discards	11.8	Average 2017–2019; in grammes
Projected discards	20.7	Average 2017–2019; percentage by number
Discard survival *	25	Percentage by number
Projected dead discards	16.4	Average 2017–2019; Percentage by number

* Only applied in scenarios where discarding is allowed.

Table 3 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Annual catch advice and scenarios. All weights are in tonnes. The figures in the table are rounded. Calculations were done with unrounded inputs and computed values may not match exactly when calculated using the rounded figures in the table.

Catch scenarios assuming recent discard rates

Basis	Total catch	Dead removals	Projected landings	Projected dead discards	Projected surviving discards	Harvest rate * %	% advice change **
	PL + PDD + PSD	PL + PDD	PL	PDD	PSD	for PL + PDD	
ICES advice basis							
MSY approach; F = EU MAP ^: F _{MSY} × Stock abundance 2021 / MSY B _{trigger}	1560	1512	1371	141	47	9.7	−45
MAP F _{MSY lower} × Stock abundance 2021 / MSY B _{trigger}	1238	1201	1088	112	37	7.7	−45
Other scenarios							
MAP F _{MSY upper} × Stock abundance 2021 / MSY B _{trigger}	1560	1512	1371	141	47	9.7	−45
F = MAP F _{MSY}	2058	1996	1809	187	62	12.8	−27
F = MAP F _{MSY lower}	1640	1591	1442	149	50	10.2	−42
F = MAP F _{MSY upper} ***	2058	1996	1809	187	62	12.8	−27
F ₂₀₁₉	1366	1325	1201	124	41	8.5	−52

Catch scenarios assuming zero discards

Basis	Total catch	Projected landings	Projected discards ^^	Harvest rate * %	% advice change **
	PL + PD	PL	PD	for PL + PDD	
ICES advice basis					
MSY approach; F = EU MAP^: F _{MSY} × Stock Abundance 2021 / MSY B _{trigger}	1479	1300	179	9.7	-48
MAP F _{MSY lower} × Stock Abundance 2021 / MSY B _{trigger}	1174	1032	142	7.7	-48
Other scenarios					
F = MAP F _{MSY}	1952	1716	236	12.8	-31
MAP F _{MSY upper} × Stock Abundance 2021 / MSY B _{trigger}	1479	1300	179	9.7	-48
F = MAP F _{MSY lower}	1555	1367	188	10.2	-45
F = MAP F _{MSY upper} ***	1952	1716	236	12.8	-31
F ₂₀₁₉	1295	1139	156	8.5	-54

^ EU multiannual plan (MAP) for Western Waters (EU, 2019).

^^ Represents the amount that would normally be discarded.

* By number.

** Advice value for 2021 relative to the corresponding 2020 values (MAP advice value of 2820, 2247, and 2820 tonnes, respectively; other values are relative to F_{MSY}).

*** $F_{\text{MSY upper}} = F_{\text{MSY}}$ for this stock.

The decrease in total catch advice is the result of the lower observed stock abundance in 2020, and the lower harvest rate used for the advice.

History of the advice, catch, and management

Table 4 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. ICES advice, landings, and discards. All weights are in tonnes.

Year	ICES advice *	Landings advice *	Catch advice	ICES landings	Total discards**
1992		3800			
1993		3800			
1994		3800			
1995		3800			
1996		3800			
1997		3800			
1998		3800			
1999		3800		1775	
2000		3800		2890	
2001		3800		2938	
2002		3800		1993	
2003		3800		2065	720
2004	Adjust TAC in line with landings of most recent 10 years	4600		1828	202
2005	Adjust TAC in line with landings of most recent 10 years	4600		2533	1648
2006	Recent average landings 2000–2002	4600		1761	454
2007	No increase in effort	-		2950	1906
2008	No increase in effort	< 5300		3090	289
2009	No increase in effort	< 5300		2185	371
2010	No new advice, same as for 2009	< 5300		2714	636
2011	See scenarios; MSY reduce catch or PA < 5300	-		1636	196
2012	MSY approach	2300		2618	347
2013	MSY approach (updated November 2012)	3100		2257	497
2014	MSY approach	2674		2526	460
2015	MSY approach	3409		2350	450
2016	MSY approach		≤ 3027 ^	3329	519
2017	MSY approach		≤ 2063 ^^	3560	424
2018	MSY approach		≤ 4322 ^^	1975	350
2019	MSY approach		≤ 2084 ^^	2083	262
2020	Management plan		2820 (range 2247–2820) ^^		
2021	Management plan		1560 (range 1238–1560) ^^		

* Advice prior to 2012 applies to FUs 20–22.

** Dead + surviving discards.

^ Assuming all catches are landed.

^^ Assuming recent discard rates.

Summary of the assessment

Table 5 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Assessment summary.

Year	UWTV abundance estimate	95% confidence interval	Landings in number	Total discards in number *	Removals in number	Harvest rate (by number)	Landings	Total discards *	Discard rate (by number)	Dead discard rate (by number)	Mean weight in landings	Mean weight in discards
	millions					%	tonnes		%		grammes	
2003			95	68	146		2065	720	41.5	34.7	21.7	10.7
2004			71	13	80		1828	202	15.6	12.2	25.9	15.4
2005			119	129	216		2533	1648	51.9	44.7	21.2	12.8
2006	1503	70	100	45	134	8.9	1761	454	31.1	25.3	17.6	10.1
2007	1136	126	165	181	301	26.5	2950	1906	52.3	45.1	17.9	10.5
2008	1114	123	144	26	163	14.6	3090	289	15.3	12.0	21.5	11.1
2009	1093	108	92	33	117	10.7	2185	371	26.4	21.2	23.7	11.3
2010	1141	88	122	45	155	13.6	2714	636	26.8	21.5	22.3	14.3
2011	1256	72	60	13	70	5.6	1636	196	18.0	14.1	27.3	14.9
2012	1498	239	120	31	144	9.6	2618	347	20.7	16.3	21.8	11.1
2013	1254	177	94	40	124	9.9	2257	497	30.0	24.3	24.1	12.4
2014	1622	268	100	33	125	7.7	2526	460	25.0	20.0	25.2	13.8
2015	1363	180	114	44	147	10.8	2350	450	28.0	22.6	20.6	10.1
2016	866	112	160	54	200	23.1	3329	519	25.1	20.0	20.8	9.7
2017	1600	153	164	39	194	12.1	3560	424	19.2	15.2	21.7	10.8
2018	876	154	98	31	121	13.8	1975	350	23.7	19.0	20.2	11.2
2019	1121	141	81	19	95	8.5	2083	262	19.1	15.1	25.8	13.7
2020	750	118										

* Surviving + dead discards.

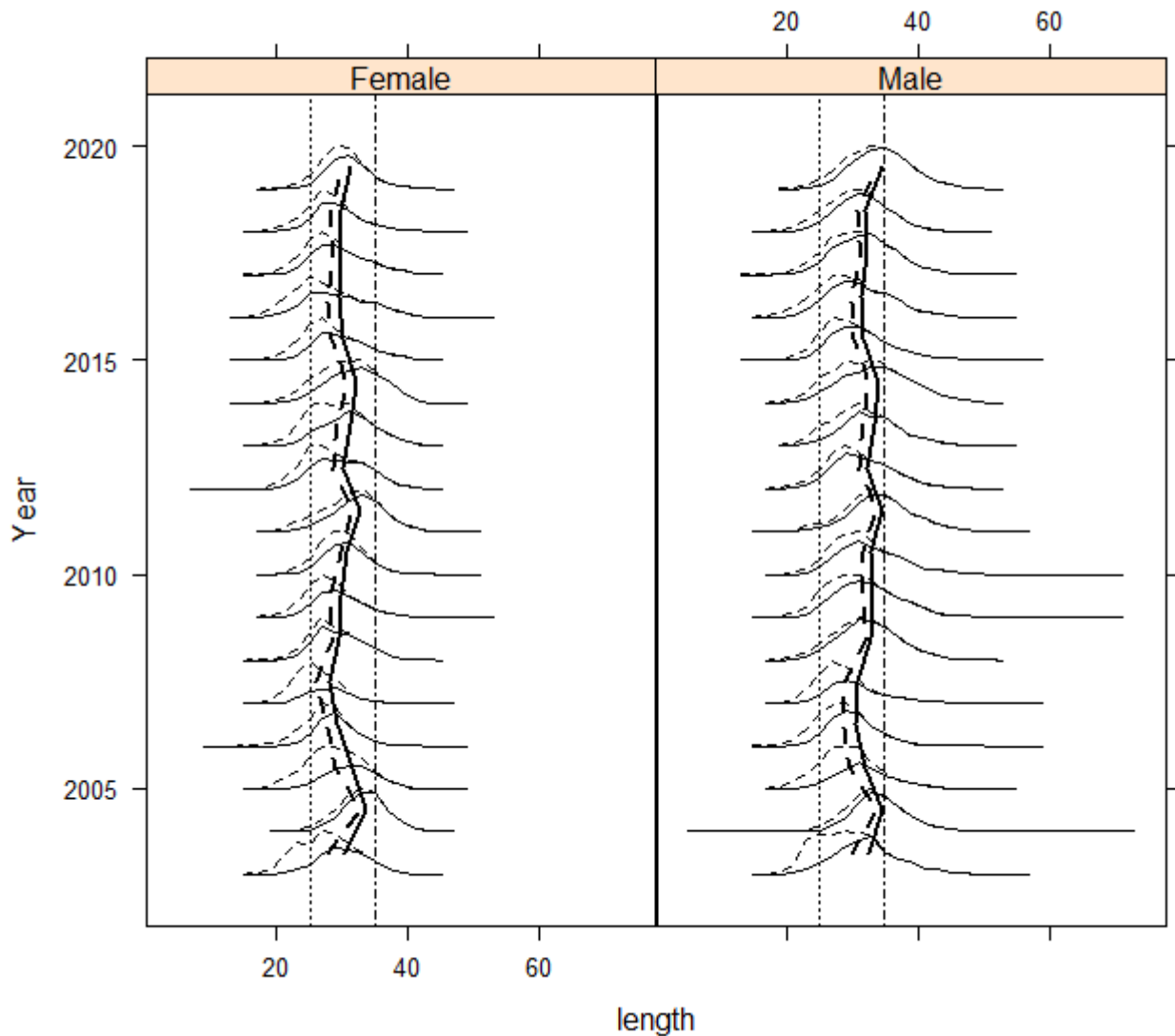


Figure 2 Norway lobster in Division 7.f–g, Functional Unit 22. Catch length–frequency distribution and mean size in catches (dotted lines) and landings (solid lines). The vertical lines indicate the minimum conservation reference size (25 mm) and the 35 mm visual reference level.

Sources and references

EU. 2019. Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008. Official Journal of the European Union, L 83: 1–17. <http://data.europa.eu/eli/reg/2019/472/oj>.

ICES. 2020. Working Group for the Celtic Seas Ecoregion (WGCSE). ICES Scientific Reports, 2:40. 924 pp. <http://doi.org/10.17895/ices.pub.5978>.

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Annex 1

ICES Advice on fishing opportunities, catch, and effort
Celtic Seas ecoregion
Published 31 October 2019

Norway lobster (*Nephrops norvegicus*) in divisions 7.g and 7.f, Functional Unit 22 (Celtic Sea, Bristol Channel)

ICES advice on fishing opportunities

ICES advises that when the EU multiannual plan (MAP) for Western waters and adjacent waters is applied, catches in 2020 that correspond to the F ranges in the MAP are between 2247 tonnes and 2820 tonnes. The entire range is considered precautionary when applying the ICES advice rule.

To ensure that the stock in Functional Unit (FU) 22 is exploited sustainably, management should be implemented at the functional unit level.

Stock development over time

The harvest rate has fluctuated over the time-series and it is now just above F_{MSY} . The stock abundance has been above $MSY B_{trigger}$ since 2006, except in 2016 and 2018.

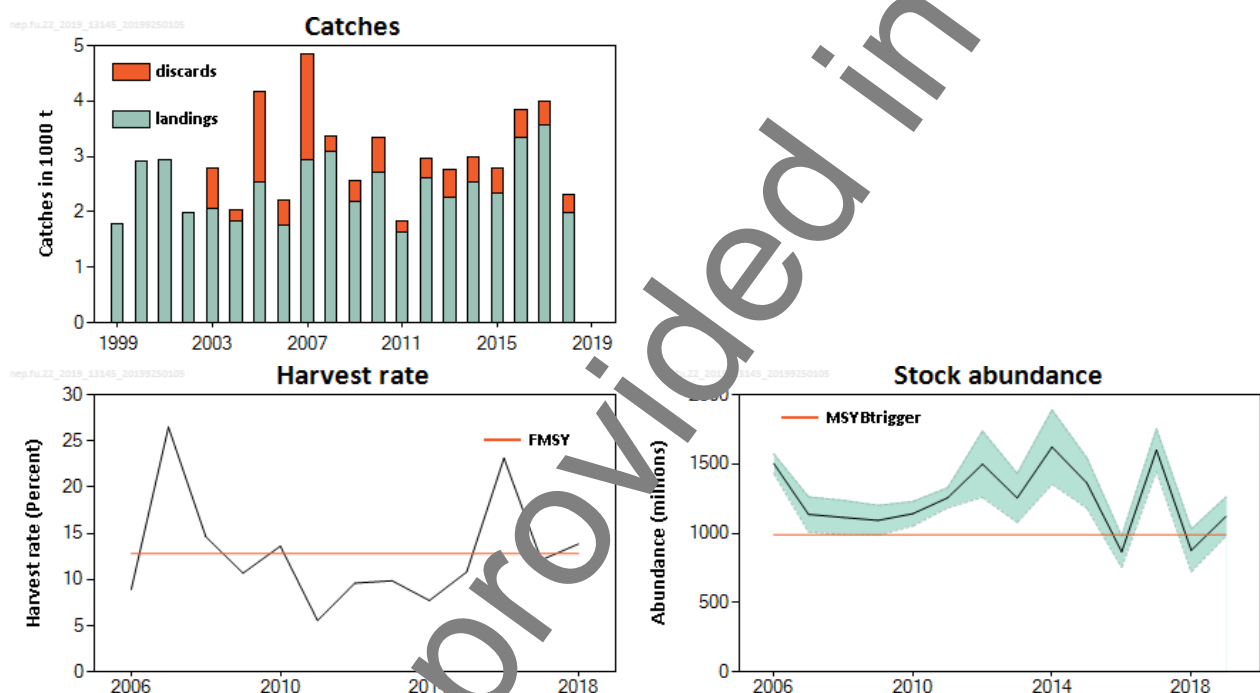


Figure 1 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Summary of the stock assessment. Catches (discard data only available from 2003), harvest rate (sum of landings and dead discards in numbers, divided by total abundance), and stock abundance (underwater TV survey, millions; 95% confidence intervals). Orange lines represent the F_{MSY} harvest rate and $MSY B_{trigger}$.

Stock and exploitation status

ICES assesses that fishing pressure on the stock is above F_{MSY} , and that stock size is above $MSY B_{trigger}$.

Table 1 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size		
		2016	2017	2018	2017	2018	2019
Maximum sustainable yield	F_{MSY}	✗	✓	✗ Above	$MSY B_{trigger}$	✓	✗ Above trigger
Precautionary approach	F_{pa}, F_{lim}	?	✓	?	B_{pa}, B_{lim}	✓	?
Management plan	F_{MGT}	✗	✓	✗ Above	B_{MGT}	✓	✗ Above trigger
						✓	Above possible reference points

Catch scenarios

Table 2 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. The basis for the catch advice and scenarios.

Variable	Value	Notes
Stock abundance (2020)	1121 million	UWTV survey 2019 (number of individuals)
Mean weight in wanted catch	20.9 grammes	Average 2016–2018
Mean weight in unwanted catch	10.6 grammes	Average 2016–2018
Unwanted catch	22.8%	Average 2016–2018 (proportion by number)
Discards survival	25%	Proportion by number
Dead unwanted catch	18.2%	Average 2016–2018 (proportion by number)

Table 3 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Annual catch advice and scenarios. All weights are in tonnes. The figures in the table are rounded. Calculations were done with unrounded inputs and computed values may not match exactly when calculated using the rounded figures in the table.

Catch scenarios assuming recent discard rates

Basis	Total catch	Dead removals	Wanted catch	Dead unwanted catch	Surviving unwanted catch	Harvest rate * %	% advice change **
	WC + DUC + SUC	WC + DUC	WC	DUC	SUC	for WC + DUC	
ICES advice basis							
EU MAP [^] : F _{MSY}	2820	2728	2452	276	92	12.8	35
F = MAP F _{MSY lower}	2247	2174	1954	220	73	10.2	7.8
F = MAP F _{MSY upper} ***	2820	2728	2452	276	92	12.8	35
Other options							
MSY approach	2820	2728	2452	276	92	12.8	35
F ₂₀₁₈	3048	2949	2651	298	99	13.84	46

Catch scenarios assuming zero discards

Basis	Total catch	Wanted catch	Unwanted catch	Harvest rate * %	% advice change **
	WC + UC	WC	UC	for WC + UC	
ICES advice basis					
EU MAP ^ : F _{MSY}	2659	2312	347	12.8	28
F = MAP F _{MSY lower}	2119	1843	276	10.2	1.68
F = MAP F _{MSY upper} ***	2659	2312	347	12.8	28
Other options					
MSY approach	2659	2312	347	12.8	28
F ₂₀₁₈	2874	2499	375	13.84	38

[^] EU multiannual plan (MAP) for Western waters (EU, 2019).

* By number.

** Advice value for 2020 relative to the advice value for 2019 (2084 tonnes).

*** F_{MSY upper} = F_{MSY} for this stock.

The increase in total catch advice is the result of the increase in observed stock abundance in 2019.

Basis of the advice

Table 4 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. The basis of the advice.

Advice basis	The EU multiannual plan (MAP) for stocks in the Western waters and adjacent waters (EU, 2019).
Management plan	The EU multiannual plan (MAP) for stocks in the Western waters and adjacent waters applies to this stock. The plan specifies conditions for setting fishing opportunities depending on stock status and making use of the F_{MSY} range for the stock. In accordance with the MAP, catches higher than those corresponding to F_{MSY} can only be taken providing SSB is greater than $MSY_{Btrigger}$, and one of the following conditions is met: a) if it is necessary for the achievement of objectives of mixed fisheries; b) if it is necessary to avoid serious harm to a stock caused by intra- or inter-species stock dynamics; c) in order to limit variations in fishing opportunities between consecutive years to not more than 20%. ICES considers that the F_{MSY} range for this stock used in the MAP is precautionary. Full details of the plan are described in EU (2019).

Quality of the assessment

Since 2006 a dedicated annual underwater television (UWTV) survey has taken place in FU 22 (Figure 2), which gives abundance estimates for the stock with high precision. Sampling of this stock is adequate.

In previous assessments the long-term average (rather than a three-year average) was used as input for the mean weight in landings and discards in the calculation of catch scenarios, in order to account for interannual variation. In 2019, the last three-year average was considered to be more appropriate given that average weights have been stable at a lower level since 2015.

In 2019 the survey camera system and reviewing method changed. A comparison showed no significant difference in density estimates between the new and the old method. Previous assumptions relating to correction factors are still applied.

Issues relevant for the advice

From 2016 the EU landing obligation was applied to all catches of Norway lobster fisheries in ICES Subarea 7, with several exemptions. Observations from the 2016–2018 fishery indicate that discarding above the minimum conservation reference size (MCRS) continues and has not changed markedly (Figure 3). Consequently, ICES is providing advice for 2020 assuming average discard rates as observed over the last three years. This is considered to be the most realistic assumption.

ICES notes that catches in Subarea 7 have been less than the TAC in recent years, as there has been a general decline in trawling fishing effort for Norway lobster (ICES, 2019).

Irish discard survival experiments indicate that the trawl discard survival may be around 64% (BIM, 2017). As a result, an exemption from the landings obligation based on high survivability has been granted by the European Commission. ICES continues to use the survival rate of 25% (ICES, 2016), as the survival rates estimated by BIM (2017) have not been evaluated by ICES.

For FU 22, the absolute density observed during the UWTV survey is medium (~ 0.4 individuals m^{-2}). The fishery in this area has been in existence since the 1960s and has been relatively stable for many years. Harvest rates around the $F_{35\%SPR}$ (the fishing mortality that gives 35% virgin SSB per recruit) are expected to deliver high long-term yield with a low probability of recruitment overfishing, and are used as proxy for F_{MSY} for FU 22.

A single TAC covers the entire ICES Subarea 7. Management should be implemented at the functional unit level to ensure that fishing opportunities are in line with the scale of the resource in each of the stocks.

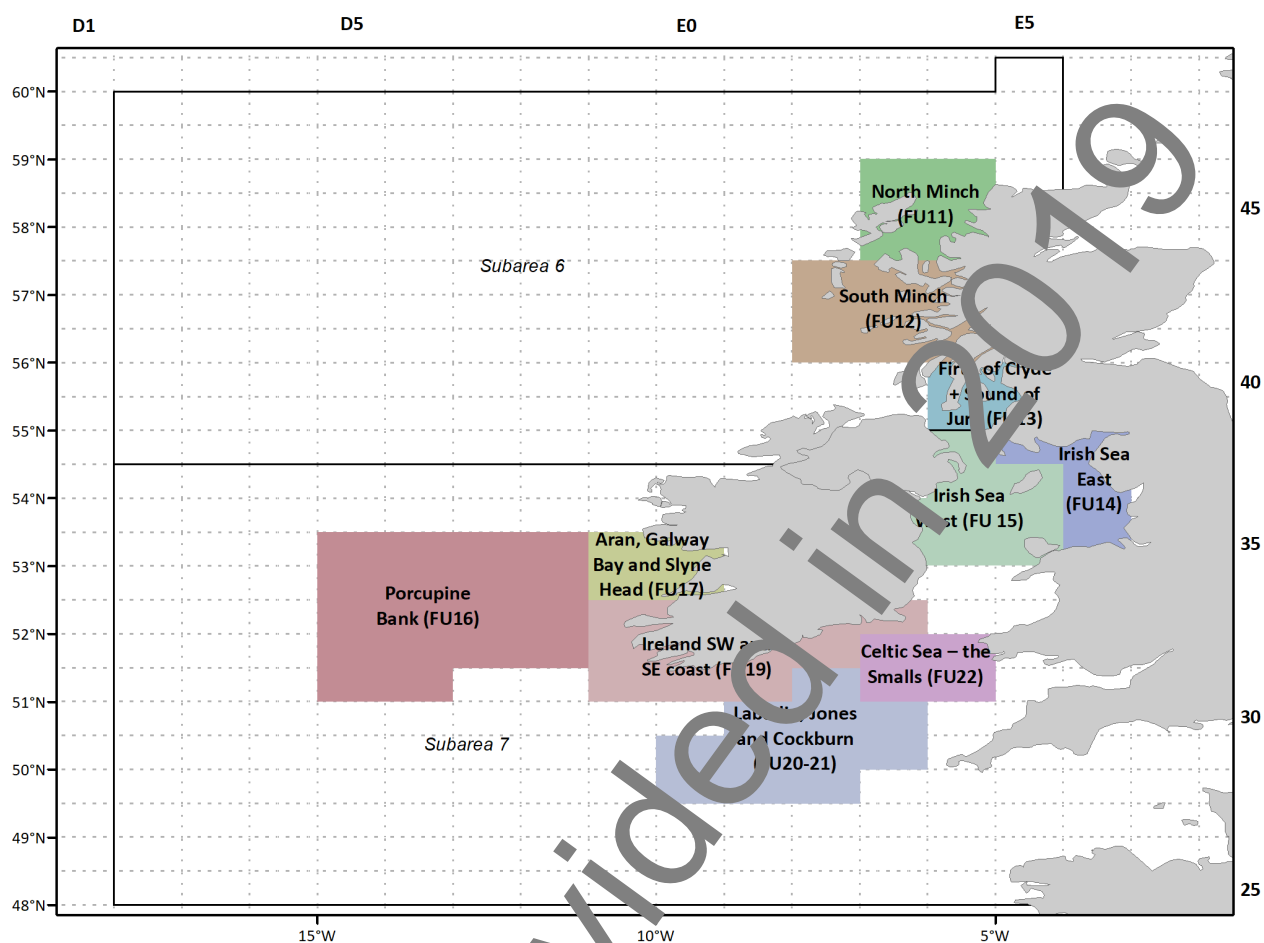


Figure 2 Norway lobster functional units in subareas 6 and 7.

Reference points

Table 5 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	990 million individuals	5% interval on the probability distribution of abundance for the time-series 2006–2015, assuming a normal distribution.	ICES (2016)
	F_{MSY}	12.8% harvest rate	F_{MSY} proxy equivalent to $F_{35\%SPR}$ for combined sexes, derived from a length-based per recruit analysis.	ICES (2016)
Precautionary approach	B_{lim}	Not defined		
	B_{pa}	Not defined		
	F_{lim}	Not defined		
	F_{pa}	Not defined		
Management plan	MAP target MSY $B_{trigger}$	990 million individuals	MSY $B_{trigger}$	EU (2019); ICES (2016)
	MAP B_{lim}	Not defined		
	MAP F_{MSY}	12.8% harvest rate	F_{MSY}	EU (2019); ICES (2016)
	MAP range F_{lower}	10.2–12.8% harvest rate	Consistent with ranges provided by ICES (2016), resulting in no more than 5% reduction in long-term yield compared with the maximum sustainable yield (MSY).	EU (2019); ICES (2016)
	MAP range F_{upper}	12.8–12.8% harvest rate	F_{MSY} upper value capped at F_{MSY} because it has not been possible to evaluate the probability of $SSB < B_{lim}$ (ICES, 2016).	EU (2019); ICES (2016)

Basis of the assessment

Table 6 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Basis of the assessment and advice.

ICES stock data category	1 (ICES, 2018).
Assessment type	Underwater TV survey (ICES, 2019).
Input data	One survey index (UWTV-F 22), commercial catches (international landings), length frequencies (from catch and discard sampling), maturity data (from commercial catch sampling and during surveys), fixed natural mortality. Discard survival rate.
Discards and bycatch	Included in the assessment since 2003.
Indicators	IBTS Q4 survey; length frequency distributions of the catches by sex.
Other information	This stock follows benchmarked procedures applied to other <i>Nephrops</i> stocks in Subarea 7 (ICES, 2009, 2014).
Working group	Working Group for the Celtic Seas Ecoregion (WGCSSE)

Information from stakeholders

No additional information is available for this stock.

History of the advice, catch, and management

Table 7 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. ICES advice, landings, and discards. All weights are in tonnes.

Year	ICES advice*	Landings advice*	Catch advice	ICES landings	Total discards**
1992		3800			
1993		3800			
1994		3800			
1995		3800			
1996		3800			
1997		3800			
1998		3800			
1999		3800		1775	
2000		3800		2000	
2001		3800		2938	
2002		3800		2993	
2003		3800		2065	720
2004	Adjust TAC in line with landings of most recent 10 years	4600		1828	202
2005	Adjust TAC in line with landings of most recent 10 years	4600		2533	1648
2006	Recent average landings 2000–2002	4600		1761	454
2007	No increase in effort	-		2950	1906
2008	No increase in effort	< 5300		3090	289
2009	No increase in effort	< 5300		2185	371
2010	No new advice, same as for 2009	< 5300		2714	636
2011	See scenarios; MSY reduce catch or PA < 5300			1636	196
2012	MSY approach	2300		2618	347
2013	MSY approach (updated November 2012)	2100		2257	497
2014	MSY approach	2674		2526	460
2015	MSY approach	3409		2350	450
2016	MSY approach		≤ 3027^	3329	519
2017	MSY approach		≤ 2063^^	3560	424
2018	MSY approach		≤ 4322^^	1975	350
2019	MSY approach		≤ 2084^^		
2020	Management plan		2247 (range 2247–2820)^^		

* Advice prior to 2012 applies to FUs 20–22.

** Dead + surviving discards.

^ Assuming all catches are landed.

^^ Assuming recent discard rates.

History of the catch and landings

Table 8 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Catch distribution by fleet in 2018 as estimated by ICES. All weights are in tonnes.

Catch		Landings	Discards	
96.2% dead	3.8% surviving	100% otter trawl	75% dead	25% surviving
2325		1975	350	

Table 9 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. History of ICES estimates for landings by country and discards. All weights are in tonnes.

Year	France	Rep. of Ireland	UK	Belgium	Total landings	Discards*
1999	1034	741	0		1775	
2000	1192	1687	11		2890	
2001	882	2054	2		2938	
2002	598	1392	3		1993	
2003	799	1257	10		2065	720
2004	454	1349	26		1828	202
2005	478	1987	68		2533	1648
2006	293	1442	19	7	1761	454
2007	216	2716	13	5	2950	1906
2008	301	2539	241	9	3090	289
2009	258	1609	306	12	2185	371
2010	129	2219	351	15	2714	636
2011	64	1521	44	7	1636	196
2012	65	2506	41	6	2618	347
2013	83	2054	107	12	2257	497
2014	29	2428	61	8	2526	460
2015	9	2215	121	1	2350	450
2016	5	2967	354	3	3329	519
2017	7	2815	737	1	3560	424
2018	3	1639	331	1	1975	350

* Surviving + dead discards.

Summary of the assessment

Table 10 Norway lobster in divisions 7.g and 7.f, Functional Unit 22. Assessment summary.

Year	UWTV abundance estimate	95% Confidence Interval	Landings in number	Total discards in number*	Removals in number	Harvest rate (by number)	Landings	Total discards*	Discard rate (by number)	Dead discard rate (by number)	Mean weight in landings	Mean weight in discards
millions						%	tonnes		%		grammes	
2003			95	68	146		2065	720	41.5	34.7	21.7	10.7
2004			71	13	84		1828	202	15.6	12.2	25.9	15.4
2005			119	129	216		2533	1648	51.9	44.7	21.2	12.8
2006	1503	70	100	45	134	8.9	1761	454	31.1	25.3	17.6	10.1
2007	1136	126	165	181	301	26.5	2950	1906	52.3	45.1	17.9	10.5
2008	1114	123	144	163	163	14.6	3090	289	15.3	12.0	21.5	11.1
2009	1093	108	92	33	117	10.7	2185	371	26.4	21.2	23.7	11.3
2010	1141	88	122	45	155	13.6	2714	636	26.8	21.5	22.3	14.3
2011	1256	72	160	13	70	5.6	1636	196	18.0	14.1	27.3	14.9
2012	1498	23	131	31	144	9.6	2618	347	20.7	16.3	21.8	11.1
2013	1254	77	94	40	124	9.9	2257	497	30.0	24.3	24.1	12.4
2014	1622	26	100	33	125	7.7	2526	460	25.0	20.0	25.2	13.8
2015	1363	100	114	44	147	10.8	2350	450	28.0	22.6	20.6	10.1
2016	866	112	160	54	200	23.1	3329	519	25.1	20.0	20.8	9.7
2017	600	153	164	39	194	12.1	3560	424	19.2	15.2	21.7	10.8
2018	8	154	98	31	121	13.8	1975	350	24.2	19.3	20.2	11.2
2019	121	141										

* Surviving + dead discards.

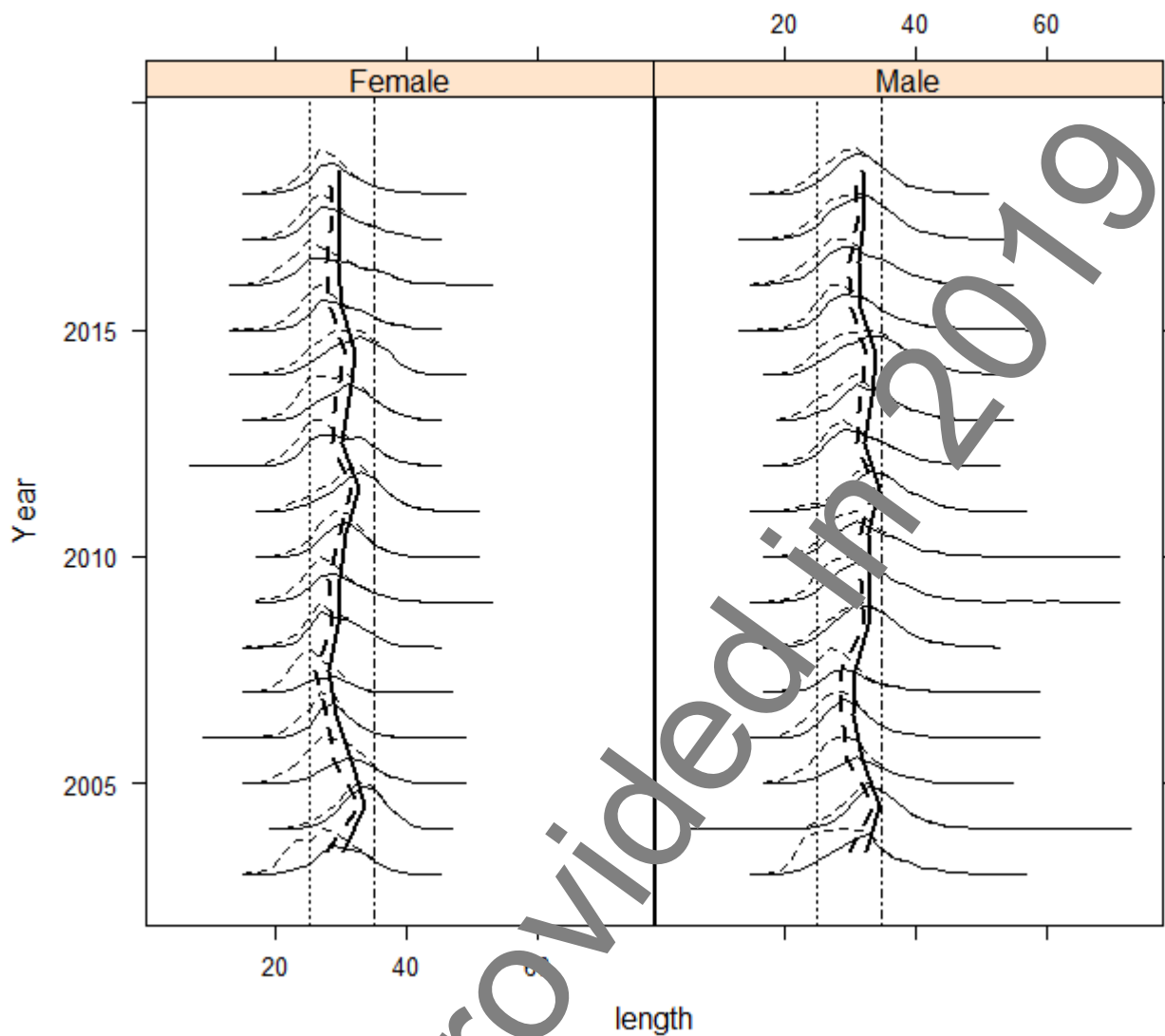


Figure 3 Norway lobster in Division 7.f-g, Functional Unit 22. Catch length–frequency distribution and mean size in catches (dotted lines) and landings (solid lines). The vertical lines indicate the minimum conservation reference size (25 mm) and the 35 mm visual reference level.

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