

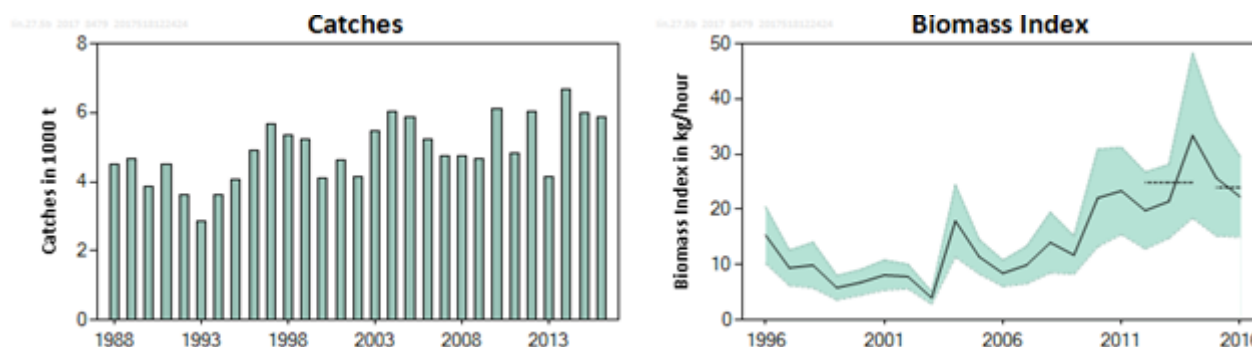
## Ling (*Molva molva*) in Division 5.b (Faroes grounds)

### ICES stock advice

ICES advises that when the precautionary approach is applied, effort should be adjusted such that catches should be no more than 5196 tonnes in each of the years 2018 and 2019. All catches are assumed to be landed.

### Stock development over time

Catches in the last three years have been around 6000 tonnes. The Faroese summer survey biomass index shows an overall increase since 2003, but has declined in the last two years.

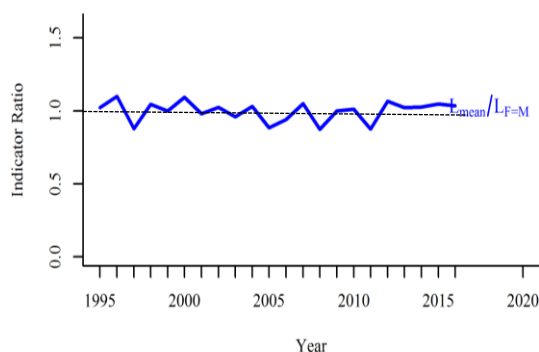


**Figure 1** Ling in Division 5.b. Left: Landings in Division 5.b. Right: Cpue (kg h<sup>-1</sup>) in the Faroese summer groundfish survey. The dashed horizontal lines indicate the average stock size index of the respective year range used to calculate the advice.

### Stock and exploitation status

**Table 1** Ling in Division 5.b. State of the stock and fishery relative to reference points. The status evaluation is based on the reference point proxy for  $F_{MSY}$ , using the length-based indicator method (ICES, 2017).

		Fishing pressure				Stock size			
		2014	2015	2016		2014	2015	2016	
Maximum sustainable yield	$F_{MSY}$ proxy	✓	✓	✓	Below	MSY	?	?	?
						$B_{trigger}$			Undefined
Precautionary approach	$F_{pa}, F_{lim}$	✓	✓	✓	Below possible reference points	$B_{pa}, B_{lim}$	?	?	?
									Undefined
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—
									Not applicable
Qualitative evaluation	—	—	—	—	Not applicable	—	↗	↘	↘
									Decreasing



**Figure 2** Ling in Division 5.b. Index ratio  $L_{\text{mean}}/LF = M$  from the length-based indicator method, used for the evaluation of the exploitation status. The exploitation status is below the  $F_{\text{MSY proxy}}$  when the index ratio value is higher than 1.

### Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The standardized cpue series from the Faroese summer groundfish survey was used as index for the 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 advised landings for the years 2016–2017. The index is estimated to have decreased by less than 20%; thus, the uncertainty cap was not applied. The precautionary buffer, based on effort, was applied in 2012. The stock is exploited below the  $F_{\text{MSY proxy}}$  indicator, but the stock size indicator has decreased in the last two years. Therefore, the PA buffer was applied. Discarding is considered negligible.

**Table 2** Ling in Division 5.b. The basis for the catch options.

Index A (2015–2016)	24 kg h <sup>-1</sup>	
Index B (2012–2014)	25 kg h <sup>-1</sup>	
Index ratio (A/B)	0.97	
Uncertainty cap	Not applied	-
Advised landings for years 2016–2017	6730 tonnes	
Discard rate	Negligible	
Precautionary buffer	Applied	0.8
Catch advice*	5196 tonnes	

\* [advice for 2016–2017] × [index ratio] × [precautionary buffer]. Calculations were done with unrounded inputs and computed values may not match exactly when calculated using the rounded figures in the table.

### Basis of the advice

**Table 3** Ling in Division 5.b. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	ICES is not aware of any agreed precautionary management plan for 2017 in this area.

### Quality of the assessment

The Faroese summer survey covers the distribution area of the fishery of ling on the Faroe Plateau.

### Issues relevant for the advice

ICES is not able to provide direct effort advice because effort data have not been provided.

## Reference points

**Table 4** Ling in Division 5.b. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger_{proxy}}$	Not defined		
	$F_{MSY_{proxy}}$	78.75 cm (2016)	Expected mean length of catch above $L_{mean}$ when $F = M$ .	(ICES (2017))
Precautionary approach	$B_{lim}$			
	$B_{pa}$	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 5** Ling in Division 5.b. Basis of assessment and advice.

ICES stock data category	3 ( <a href="#">ICES, 2016</a> ).
Assessment type	Survey cpue trends-based assessment (ICES, 2017).
Input data	Faroese summer groundfish trawl survey ( $kg\ h^{-1}$ ).
Discards and bycatch	Discarding is considered negligible.
Indicators	Length-based indicator.
Other information	None.
Working group	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources ( <a href="#">WGDEEP</a> )

## Information from stakeholders

There is no available information.

## History of the advice, catch, and management

**Table 6** Ling in Division 5.b. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	TAC EU Subarea 5 (EU and international waters)	TAC EU Division 5.b (Faroese waters)**	TAC Faroes Division 5.b	ICES landings Division 5.b
2003	30% reduction on fishing effort***		54	3600	-	5453
2004	Biennial***		54	3600	-	6039
2005	No increased in effort		48	3600	-	5849
2006	Biennial			3065	-	5213
2007	No increased in effort	-	34	3065	-	4731
2008	Biennial	-	34	3065	-	4747
2009	No increased in effort	-	34	3065	-	4643
2010	Biennial	-	34	2700	-	6129
2011	No increase in effort and a reduction in catches should be considered	-	33	0	-	4843
2012	No new advice, same as 2011	-	33	0	--	6011
2013	20% decrease in effort	-	33	0	-	4132
2014	No new advice, same as 2013	-	-	-	-	6655
2015	Same effort advised as for 2013	-	-	-	-	5974
2016	Adjust effort corresponding to catch advice	6730		2000	-	5886*
2017	Biennial	6730		2000	-	
2018	Adjust effort corresponding to catch advice	≤ 5196				
2019	Biennial	≤ 5196				

\* Preliminary value.

\*\* Combined TAC for ling and blue ling.

\*\*\* Advice for ling in the Northeast Atlantic.

## History of the catch and landings

**Table 7** Ling in Division 5.b. Catch distribution by fleet in 2016 as estimated by ICES.

Catch (2016)	Landings		Discards
5886 tonnes	Trawl 37%	Longline 63%	negligible
	5886 tonnes		

**Table 8** Ling in Division 5.b. History of ICES estimated commercial catch presented by area for each country participating in the fishery. All weights are in tonnes.

Year	Subdivision 5.b <sub>1</sub>									Subdivision 5.b <sub>2</sub>				Division 5.b
	Denmark (***)	Faroes	France	Germany	Norway	UK (E&W) (**)	UK (Scotland) (**)	Russia	Total 5.b <sub>1</sub>	Faroes	France	Norway	Total 5.b <sub>2</sub>	Total 5.b
1988	42	1383	53	4	884	1	5		2372	832		1284	2116	4488
1989		1498	44	2	1415		3		2962	362		1328	1690	4652
1990		1575	36	1	1441		9		3062	162		633	795	3857
1991		1828	37	2	1594		4		3465	492		555	1047	4512
1992		1218	3		1153	15	11		2400	577		637	1214	3614
1993		1242	5	1	921	62	11		2242	282		332	614	2856
1994		1541	6	13	1047	30	20		2657	479		486	965	3622
1995		2789	4	13	446	2	32		3286	281		503	784	4070
1996		2672			1284	12	28		3996	102		798	900	4896
1997		3224	7		1428	34	40		4733	526		398	924	5657
1998		2422	6		1452	4	145		4029	511		819	1330	5359
1999		2446	17	3	2034		71		4571	164	4	498	666	5238
2000		2103	7	1	1305	2	61		3479	229	1	399	629	4109
2001		2069	14	3	1496	5	99		3686	420	6	497	923	4609
2002		1638	6	2	1640	3	239		3528	150	4	457	611	4139
2003		2139	12	2	1526	3	215		3897	624	4	927	1555	5453
2004		2733	15	1	1799	3	178	2	4731	1058	3	247	1308	6039
2005		2886	3		1553	3	175		4620	575	7	647	1229	5849
2006	3	3563	6		850		136		4558	472	6	177	655	5213
2007	2	3004	9		1071		6		4092	327	4	309	640	4731
2008		3354	4		740	32	25	11	4166	458	3	120	580	4747
2009	13	3471	2		419		270		4174	270	1	198	469	4643
2010	28	4906	2		442		121		5500	393	1	236	630	6129
2011	49	4270	2						4321	522	0		522	4843
2012	117	5452	7						5576	434	1		435	6011
2013	3	3734	7						3744	387	1		388	4132
2014		5653	10		308		7	13	5990	276		389	665	6655
2015		4375	15		993	1	3	6	5392	244	1	337	582	5974
2016*		4214	4		855	0	114		5187	569	4	126	699	5886

\* Preliminary.

\*\* Includes Subdivision 5.b<sub>2</sub>.

\*\*\* Includes Greenland.

## Summary of the assessment

**Table 9** Ling in Division 5.b. Assessment summary.

Year	Biomass index (kg h <sup>-1</sup> )	High	Low	Landings (tonnes)
1988				4488
1989				4652
1990				3857
1991				4512
1992				3614
1993				2856
1994				3622
1995				4070
1996	15.344	20.455	10.232	4896
1997	9.417	12.606	6.227	5657
1998	9.909	14.042	5.776	5359
1999	5.828	8.038	3.617	5238
2000	6.775	9.094	4.455	4109
2001	8.102	10.823	5.38	4609
2002	7.856	10.077	5.635	4139
2003	3.983	5.11	2.856	5453
2004	17.91	24.447	11.374	6039
2005	11.428	14.541	8.314	5849
2006	8.444	10.807	6.081	5213
2007	9.921	13.311	6.532	4731
2008	14.002	19.484	8.52	4747
2009	11.736	15.179	8.294	4643
2010	22.058	30.878	13.237	6129
2011	23.348	31.226	15.469	4843
2012	19.787	26.75	12.823	6011
2013	21.435	28.104	14.766	4132
2014	33.357	48.288	18.426	6655
2015	25.673	36.158	15.189	5974
2016	22.265	29.554	14.975	5886

## 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.

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ICES. 2017. Report of the Working Group on the Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP), 24 April–1 May 2017, Copenhagen, Denmark. ICES CM 2017/ACOM:14. 702 pp.