

**ECOREGION**      **Widely distributed and migratory stocks**  
**STOCK**            **Tusk (*Brosme brosme*) in Division VIb (Rockall)**

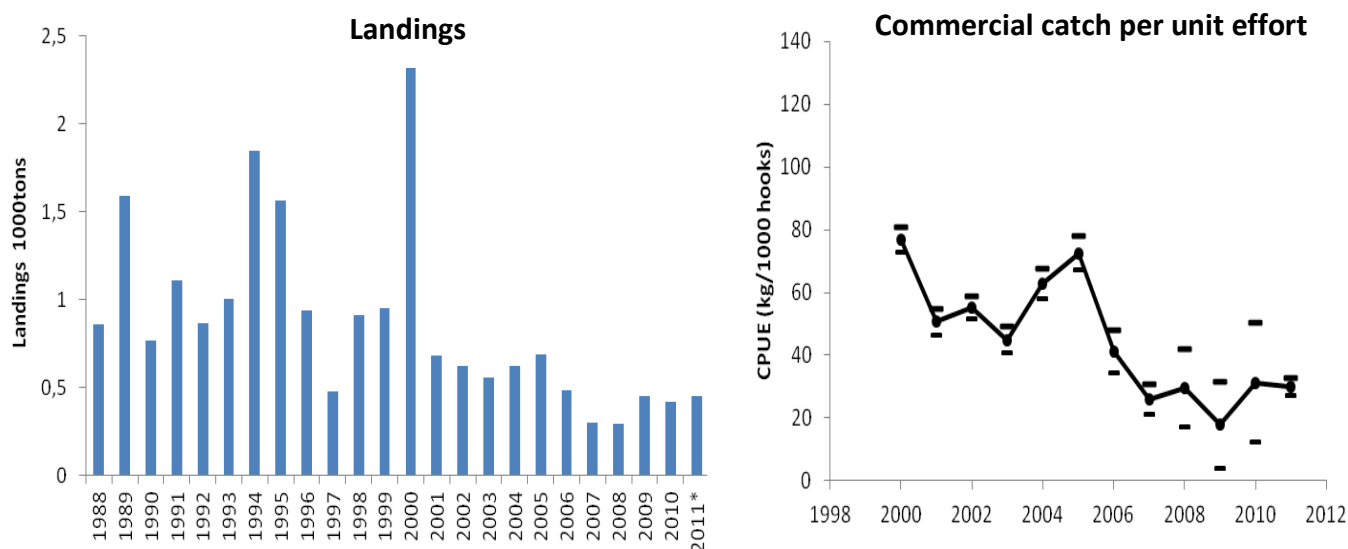
**Advice for 2013 and 2014**

Based on the ICES approach for data-limited stocks, ICES advises catches of no more than 350 t.

This is the first year ICES is providing quantitative advice for data-limited stocks (see Quality considerations).

**Stock status**

F (Fishing Mortality)		
		2009–2011
MSY ( $F_{MSY}$ )	?	Unknown
Precautionary approach ( $F_{pa}, F_{lim}$ )	?	Unknown
SSB (Spawning-Stock Biomass)		
		2009–2011
MSY ( $B_{trigger}$ )	?	Unknown
Precautionary approach ( $B_{pa}, B_{lim}$ )	?	Unknown
Qualitative evaluation	→	Stable



**Figure 9.4.12.4.1** Tusk in Division VIb. Left: Landings (in thousand tonnes, 2011 values are preliminary); Right: Cpue ([kg/hook] x1000) for tusk in Division VIb based on electronic logbooks.

The only information on abundance of tusk is from an index that may not be accurate (i.e. the index is not standardized and does not take changes in fishing patterns into account), which implies that it should not be read as showing precise changes in abundance over time. The landings have been low since 2001, with a decreasing trend until 2008. The last three years the landings have remained stable at around 500 tonnes. The cpue also shows a decreasing trend until 2007; after this it has remained at a stable low level. The interpretation of these plots is that the abundance is stable at current catch levels.

**Management plans**

No specific management objectives are known to ICES.

## Biology

The life history traits are in line with other members of the gadoid family and suggest that tusk is less vulnerable to fishing mortality than typical deep-water species.

## The fisheries

Tusk is a bycatch species in the trawl, gillnet, and longline fisheries in Division VIb. Norway has traditionally landed the largest percentage of the total catch and in 2011 Norwegian longliners reported 96% of the total landings.

Since 12 January 2007 parts of the Rockall bank have been closed to fishing with bottom trawls, gillnets, and longlines. The closed areas are areas traditionally fished by the Norwegian longline fleet.

In 2004 Russia initiated a longline fishery of ling with a bycatch of tusk in international waters of the Rockall Bank. The maximum catch (137 t) was taken in 2005. In recent years the intensity of the Russian longline fishery has decreased. Small bycatches of tusk were also taken in the area by trawlers targeting haddock.

<b>Catch distribution</b>	Total catch (2011) was 0.45 kt, where 100% were landings (96% longline and 4% other gear types). Discard information is not available.
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## Quality considerations

The Norwegian cpue index is not standardized. A standardized cpue series will be presented in 2013.

The methods applied to derive quantitative advice for data-limited stocks are expected to evolve as they are further developed and investigated.

## Scientific basis

<b>Assessment type</b>	Landings and cpue trends.
<b>Input data</b>	Landings data and Norwegian longline cpue.
<b>Discards and bycatch</b>	Not available.
<b>Indicators</b>	None.
<b>Other information</b>	None.
<b>Working group report</b>	<a href="#">WGDEEP</a>

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**Reference points**

No reference points have been proposed for this stock. Adult abundance as measured by the commercial index is below the average of the time-series; however, the status of the stock relative to historical levels is unknown and it may have been higher in the past. The level of the biomass relative to  $B_{\text{trigger}}$  is therefore unknown.

**Outlook 2013 and 2014**

The assessment of the stock is based on trends of an abundance index from commercial catches. There are no forecasts available.

***ICES approach to data-limited stocks***

For data-limited stocks for which an abundance index is available, ICES uses as harvest control rule an index-adjusted *status quo* catch. The advice is based on a comparison of the two most recent index values with the three preceding values, combined with recent catch or landings data. Knowledge about the exploitation status also influences the advised catch.

There is an indication of stable abundance in the fishable biomass cpue from the commercial cpue index. This implies catches equal to the average catch of the last three years, corresponding to catches of no more than 440 t.

Additionally, considering that exploitation is unknown, ICES advises that catches should decrease by a further 20% as a precautionary buffer. This results in catches of no more than 350 t in 2013.

**Additional considerations**

The available information shows no negative effect on the stock from the current fishing effort (2007 to 2011). However, it is unknown if the current exploitation is appropriate in regard to MSY. ICES therefore advises that there should be no increase in catch or effort (380 tonnes).

Tusk is primarily fished in the depth range 200–500 m, though it is also found at shallower depths.

***Comparison with previous assessment and advice***

The basis for the assessment has not changed. The basis for the advice this year is the ICES approach to data-limited stocks.

**Source**

ICES. 2012. Report of the Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP), 29 March–5 April 2012, ICES Headquarters, Copenhagen. ICES CM 2012/ACOM:17.

**Table 9.4.12.4.1** Tusk in Division VIb. ICES advice and landings.

Year	ICES Advice <sup>1</sup>	Predicted catch corresp. to advice	ICES landings
2003	-		0.56
2004	-		0.63
2005	-		0.69
2006	-		0.49
2007	-		0.30
2008	-		0.29
2009	Constrain catches to 2003–2007 average	0.53	0.47
2010	Biennial	0.53	0.42
2011	Reduce catches by at least the rate of decline of the cpue	-	0.45
2012	No new advice, same as 2011	-	
2013	20% reduction in catches	< 0.35	
2014	No new advice, same as 2013	< 0.35	

Weights in thousand tonnes.

<sup>1</sup> Prior to 2008 advice for this stock was combined with other areas (see Table 9.4.12.1).**Table 9.4.12.4.2** Tusk in Division VIb. Working group estimate of landings by country in Division VIb (tonnes).

Year	Faroes	France	German y	Ireland	Iceland d	Norway	E & W	N.I.	Scot.	Russia	Total
1988	217		-	-		601	8	-	34		<b>860</b>
1989	41	1	-	-		1537	2	-	12		<b>1593</b>
1990	6	3	-	-		738	2	+	19		<b>768</b>
1991	-	7	+	5		1068	3	-	25		<b>1108</b>
1992	63	2	+	5		763	3	1	30		<b>867</b>
1993	12	3	+	32		899	3	+	54		<b>1003</b>
1994	70	1	+	30		1673	6	-	66		<b>1846</b>
1995	79	1	+	33		1415	1		35		<b>1564</b>
1996	0	1		30		836	3		69		<b>939</b>
1997	1	1		23		359	2		90		<b>476</b>
1998		1		24	18	630	9		233		<b>915</b>
1999				26	-	591	5		331		<b>953</b>
2000		2		22		1933	14		372	1	<b>2344</b>
2001	1	1		31		476	10		157	6	<b>682</b>
2002		8		3		515	8		88		<b>622</b>
2003		7		18		452	11		72	1	<b>561</b>
2004		9		1		508	4		45	60	<b>627</b>
2005		5		9		503	5		33	137	<b>692</b>
2006	10	1		16		431	2		25	2	<b>487</b>
2007	4	0		8		231	1		30	25	<b>299</b>
2008	41	0		2		190	0		16	44	<b>293</b>
2009	70	0		4		358	0		17	3	<b>452</b>
2010	57	0		1		348			13		<b>419</b>
2011*	3	0				433			14		<b>450</b>

\*Preliminary.