

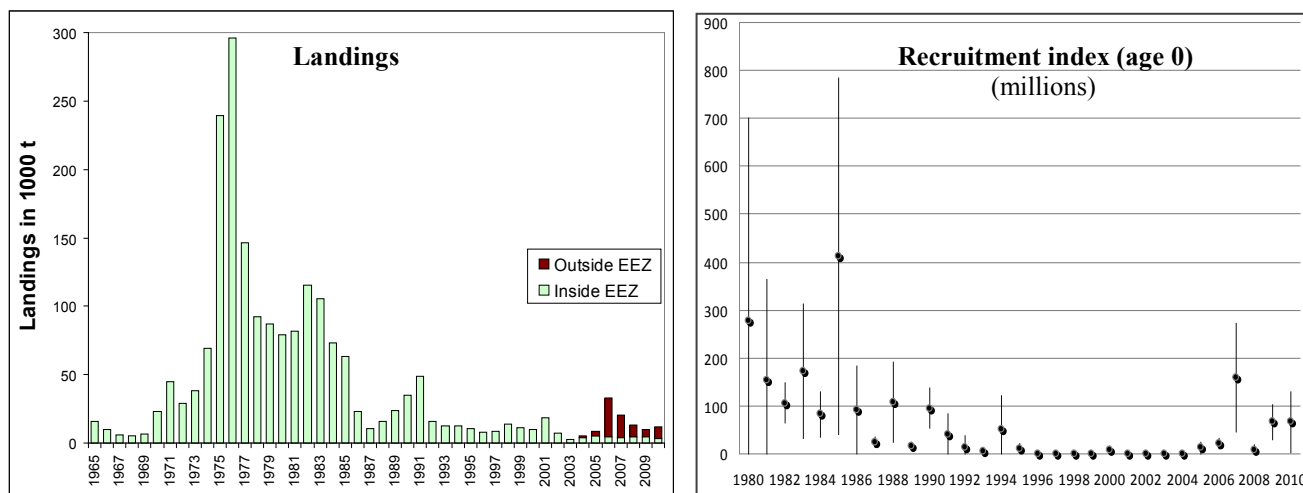
**ECOREGION**      **Barents Sea and Norwegian Sea**  
**STOCK**            **Beaked redfish (*Sebastes mentella*) in Subareas I and II**

**Advice for 2012**

The 2010 data (landings and survey) do not change the perception of the stock. Therefore, the advice for this fishery in 2012 is the same as the advice given in 2010 for the 2011 fishery. ICES advises that *there should be no directed trawl fishery on Sebastes mentella in Subareas I and II. Area closures should be maintained and bycatch limits should be as low as possible until a significant increase in the spawning-stock biomass (and a subsequent increase in the number of juveniles) has been verified.*

**Stock status**

F (Fishing Mortality)	
<b>2008-2010</b>	
MSY ( $F_{MSY}$ )	? Unknown
Precautionary approach ( $F_{pa}, F_{lim}$ )	? Unknown
SSB (Spawning-Stock Biomass)	
<b>2009-2011</b>	
MSY ( $B_{trigger}$ )	? Unknown
Precautionary approach ( $B_{pa}, B_{lim}$ )	? Unknown
Qualitative evaluation	✗ Low due to recruitment failure



**Figure 3.4.5.1** Beaked redfish *Sebastes mentella* in Subareas I and II. Landings ('000 tonnes). Recruitment as abundance index of 0-group redfish (believed to be mostly *S. mentella*) in millions from the Barents Sea 0-group survey (vertical lines are 95% confidence limits).

Due to recruitment failure in the year classes 1991–2005, ICES considers it necessary to protect the spawning biomass since very few new mature individuals will enter the stock for at least the next 12–15 years.

An 0-group survey indicates improved recruitment of the 0-group from 2007 to 2010, except for a low value of the 2008 year class.

**Management plans**

No specific management objectives have so far been implemented.

## Biology

This species is long-lived (maximum age 75), and inhabits pelagic and epibenthic habitats from 300 to 1400 m in the North Atlantic. The male and female aggregate to mate; the female releases live larvae (ovoviviparous) along the continental slope from 62°N to 74°N during March–April. The size and age at first maturity (50%) are 31 cm and 11 years. Larvae are pelagic and drift northward along the continental slope in the surface layers and eventually disperse over the shelf in the Barents Sea. The juveniles are predominantly distributed in the Barents Sea and Svalbard areas. Adults are widely distributed on the shelf, slope, and open ocean, but south of 69°N hardly on the shelf.

## The fisheries

A pelagic fishery for *S. mentella* has developed in the Norwegian Sea outside EEZs since 2004. This fishery is managed by the North-East Atlantic Fisheries Commission who, by consensus, adopted a TAC for 2011 of 7900 t. Other catches of *S. mentella* are taken as bycatches in the demersal cod/haddock/Greenland halibut fisheries, as juveniles in the shrimp trawl fisheries, and occasionally in the pelagic blue whiting and herring fisheries in the Norwegian Sea.

<b>Catch by fleet</b>	Total catch (2010 = 11.8 kt, of which 70% is taken by pelagic trawl in international waters in the Norwegian Sea and 30% as bycatch in the Barents Sea and adjacent waters.
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## Scientific basis

<b>Assessment type</b>	Qualitative assessment of trends in surveys and supplementary information from age and length distributions of commercial catches.
<b>Input data</b>	Survey trends (Norwegian Sea pelagic surveys, international 0-group survey in Barents Sea and Svalbard areas in August–September, and bottom trawl surveys). Length and age composition of commercial catches.
<b>Discards and bycatch</b>	Not available.
<b>Indicators</b>	None.
<b>Other information</b>	None.
<b>Working group report</b>	<a href="#">AFWG</a>

**ECOREGION**      **Barents Sea and Norwegian Sea**  
**STOCK**            **Beaked redfish (*Sebastes mentella*) in Subareas I and II**

**Reference points**

No reference points are defined for this stock.

**Outlook for 2012**

No analytical assessment is presented for this stock. Therefore, fishing possibilities cannot be projected.

***PA approach***

The 2010 data (landings and survey) do not change the perception of the stock. Therefore, the advice for this fishery in 2012 is the same as the advice given in 2010 for the 2011 fishery. ICES advises that: “*there should be no directed trawl fishery on *Sebastes mentella* in Subareas I and II in 2012. Area closures should be maintained and bycatch limits should be as low as possible until a significant increase in the spawning-stock biomass (and a subsequent increase in the number of juveniles) has been verified*”.

**Additional considerations**

In order to assess the state of the stock, it is necessary to survey the whole distribution area of *S. mentella* in Subareas I and II, both the pelagic and the demersal components. Coordinated pelagic and demersal surveys should be continued.

An acoustic/trawl survey was conducted in 2008 and 2009 in the Norwegian Sea and could be considered as a biomass index of the mature fish, but the time-series is still too short.

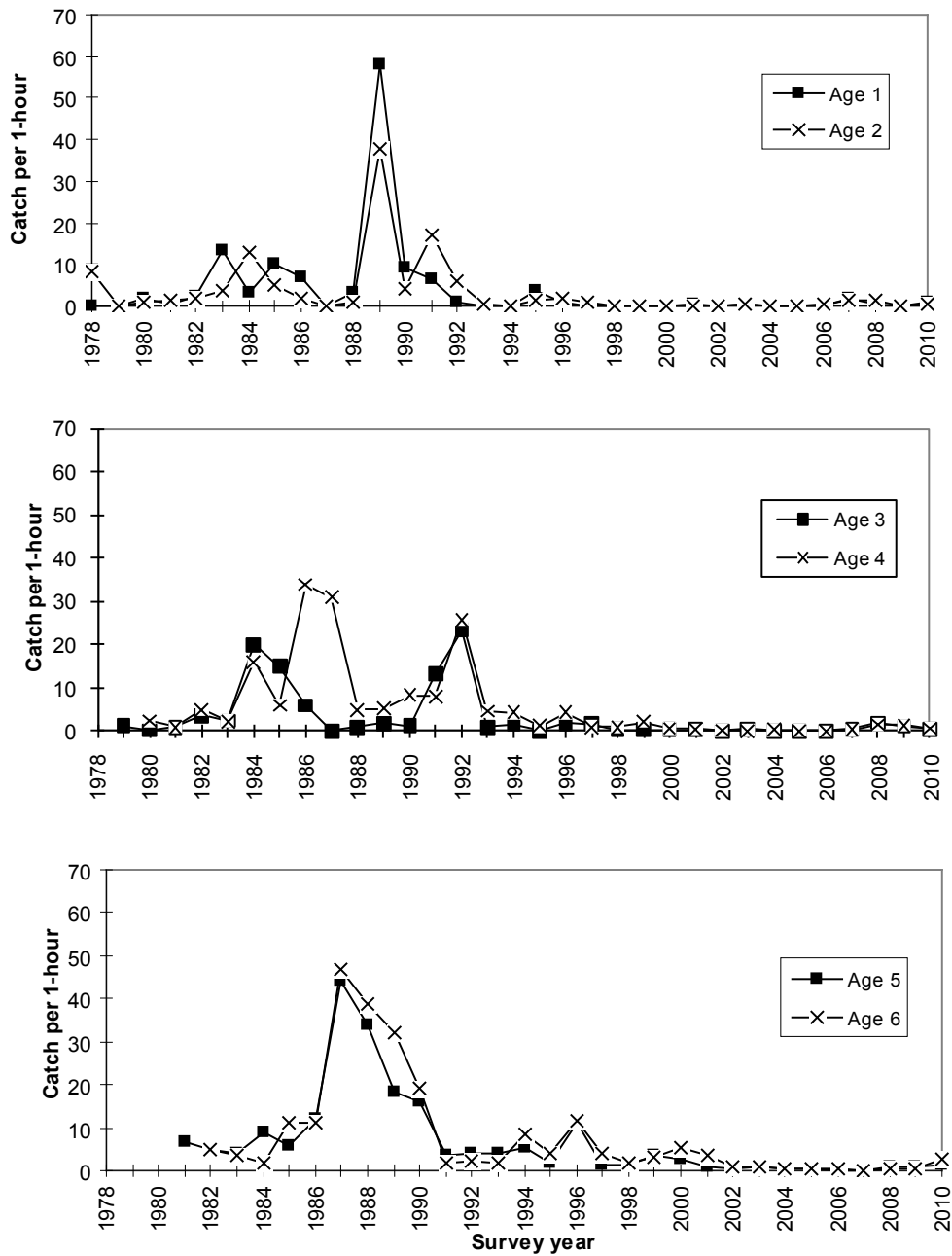
A reliable assessment of the stock and proper understanding of the fisheries dynamics are dependent on complete and detailed catch and landings data from all nations fishing on the resource, as well as accompanying biological data, being provided to ICES.

It is important that the age reading of mature fish of 20 years or more follow ICES recommendations, and that the current discrepancies are solved before the benchmark assessment next year.

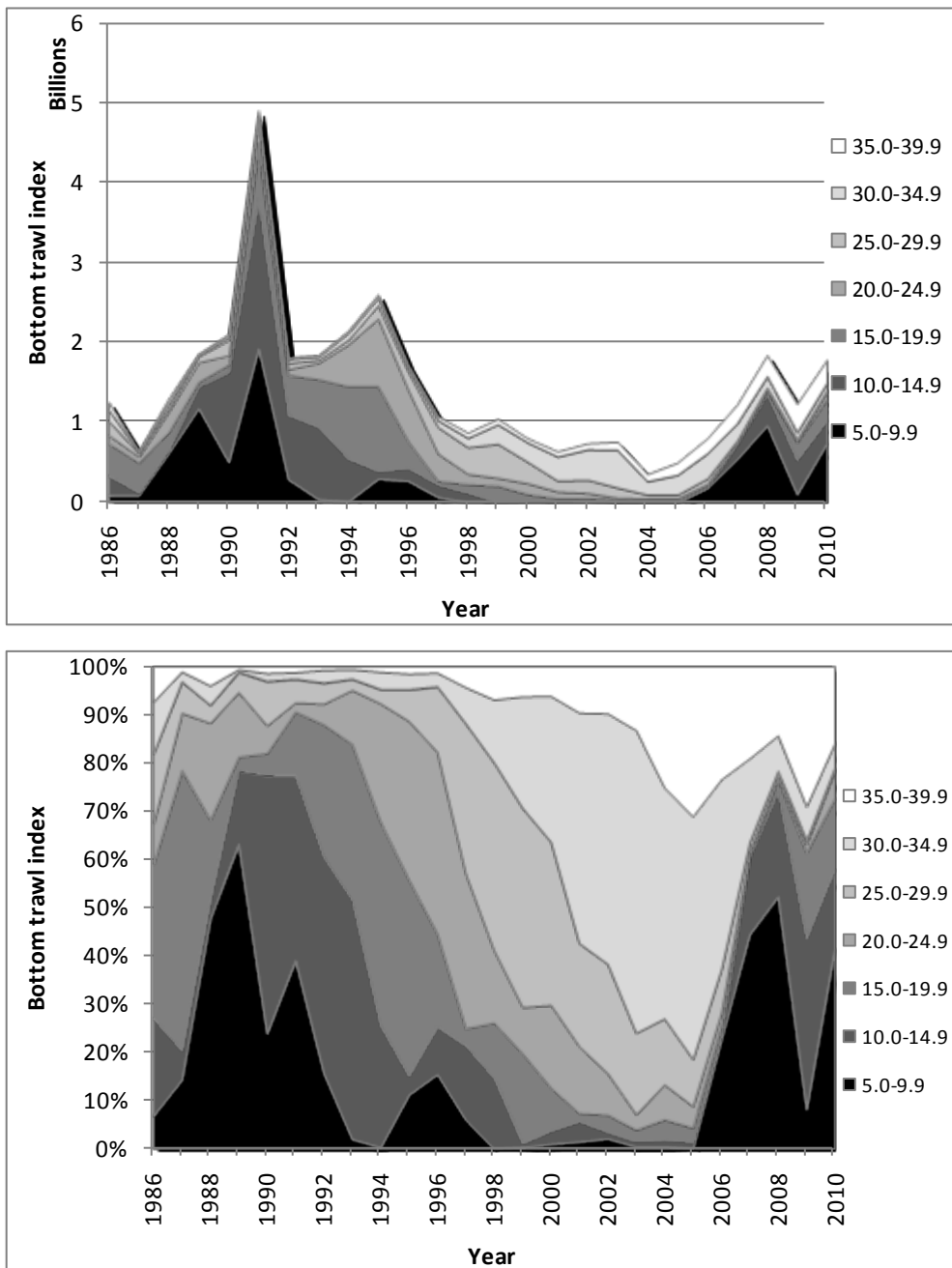
**Source**

ICES. 2011. Report of the Arctic Fisheries Working Group, 28 April–4 May 2011. ICES CM 2011/ACOM:05.

Mean catch per hour-trawling of young *Sebastes mentella*



**Figure 3.4.5.2** Beaked redfish *Sebastes mentella* in Subareas I and II. Catch (numbers of specimens) per hour trawling of different ages of *S. mentella* in the Russian groundfish survey in the Barents Sea and Svalbard areas.



**Figure 3.4.5.3** Beaked redfish *Sebastes mentella* in Subareas I and II. Abundance indices disaggregated by length when combining the Norwegian bottom trawl surveys 1986–2010 in the Barents Sea (winter) and at Svalbard (summer/fall). Top: absolute index values. Bottom: relative frequencies.

**Table 3.4.5.1** Beaked redfish (*Sebastes mentella*) in Subareas I and II. ICES advice, management, and landings.

Year	ICES Advice	Predicted catch corresp. to advice	Agreed TAC	Official Landings <sup>1)</sup>	ICES Catch
1987	Precautionary TAC	70 <sup>1</sup>	85	35	11
1988	$F \leq F_{0.1}$ ; TAC	11	-	41	16
1989	<i>Status quo</i> F; TAC	12	-	47	24
1990	<i>Status quo</i> F; TAC	18	-	63	35
1991	F at $F_{med}$ ; TAC	12	-	68	49
1992	If required, precautionary TAC	22	-	32	16
1993	If required, precautionary TAC	18	18	30	13
1994	If required, precautionary TAC	-	-	31	13
1995	Lowest possible F	-	-	26	10
1996	Catch at lowest possible level	-	-	26	8
1997	Catch at lowest possible level	-	-	26	9
1998	No directed fishery, reduce bycatch	-	-	33	14
1999	No directed fishery, reduce bycatch	-	-	30	11
2000	No directed fishery, bycatch at lowest possible level	-	-	25	10
2001	No directed fishery, bycatch at lowest possible level	-	-	29	18
2002	No directed fishery, bycatch at lowest possible level	-	-	17	7
2003	No directed fishery, bycatch at lowest possible level	-	-	10	3
2004	No directed trawl fishery and low bycatch limits	-	-	13	5 <sup>2</sup>
2005	No directed trawl fishery and low bycatch limits	-	-	16	8 <sup>2</sup>
2006	No directed trawl fishery and low bycatch limits	-	-	40	33 <sup>2</sup>
2007	No directed trawl fishery and low bycatch limits	-	15.5 <sup>3</sup>	27	20 <sup>2</sup>
2008	Protection of juveniles, no directed trawl fishery and low bycatch limits	-	14.5 <sup>3</sup>	20	13 <sup>2</sup>
2009	Protection of juveniles, no directed trawl fishery and low bycatch limits	-	10.5 <sup>3</sup>	16	10 <sup>2</sup>
2010	Protection of juveniles, no directed trawl fishery and low bycatch limits	-	8.6 <sup>3</sup>	19	12 <sup>2</sup>
2011	Protection of juveniles, no directed trawl fishery and low bycatch limits	-	7.9 <sup>3</sup>		
2012	Protection of juveniles, no directed fishery and low bycatch limits	-			

Weights in '000 t.

<sup>1</sup> Includes both *Sebastes mentella* and *S. marinus*.

<sup>2</sup> Includes the pelagic catches in the Norwegian Sea outside the EEZ.

<sup>3</sup> TAC set by the North-East Atlantic Fisheries Commission (NEAFC) for an Olympic fishery in international waters.

**Table 3.4.5.2** Beaked redfish (*Sebastes mentella*) in Subareas I and II. Nominal catch (t) by country.

Year	Canada	Denmark	Faroe Islands	France	Germany <sup>3</sup>	Greenland	Ireland
1993	8	4	13	50	35	1	-
1994	-	28	4	74	18	1	3
1995	-	-	3	16	176	2	4
1996	-	-	4	75	119	3	2
1997	-	-	4	37	81	16	6
1998	-	-	20	73	100	14	9
1999	<b>Iceland</b>	-	73	26	202	50	3
2000	48	<b>Estonia</b>	50	12	62	29	1
2001	3	-	74	16	198	17	4
2002	41	15	75	58	99	18	4
2003	5	-	64	22	32	8	5
2004	10	-	588	13	10	4	3
2005	4	5	1,147	46	33	39	4
2006	2,513	396	3,808	215	2,483	63	4
2007	1,587	684	2,197	234	520	29	17
2008	9	-	1,849	187	16	25	9
2009	33	-	1,343	15	42	-	-
2010 <sup>1</sup>	2	-	979	175	21	12	-

Year	Norway	Poland	Portugal	Russia	Spain	UK (Eng. & Wales)	UK (Scotland)	Total
1993	5,182	-	963	6,260	5	293	-	12,814
1994	6,511	-	895	5,021	30	124	12	12,721
1995	2,646	-	927	6,346	67	93	4	10,284
1996	6,053	-	467	925	328	76	23	8,075
1997	4,657	1	474	2,972	272	71	7	8,598
1998	9,733	13	125	3,646	177	93	41	14,045
1999	7,884	6	65	2,731	29	112	28	11,209
2000	6,020	2	115	3,519	87		130 <sup>3</sup>	10,075
2001	13,937	5	179	3,775	90		120 <sup>3</sup>	18,418
2002	2,152	8	242	3,904	190	<b>Sweden</b>	188 <sup>3</sup>	6,993
2003	1,210	7	44	952	47	-	124 <sup>3</sup>	2,520
2004	1,375	42	235	2,879	257	1	76 <sup>3</sup>	5,493
2005	1,760	-	140	5,023	163	<b>Netherl -7</b>	95 <sup>3</sup>	8,465
2006	4,710	2,496	1,804	11,413	710	<b>Lithu -845</b>	1,027 <sup>3</sup>	33,261
						<b>Latv-341</b>		
						<b>Can - 433</b>		
2007	3,209	1,081	1,483	5,660	2,181	<b>Lithu -785</b>	202 <sup>3</sup>	20,219
						<b>Latvia-349</b>		
2008	2,214	8	713	7,117	463	<b>Lithu -117</b>	83 <sup>3</sup>	13,089
						<b>Latvia-267</b>		
						<b>Netherl -13</b>		
2009	2,567 <sup>1</sup>	338	806	3,843	177	<b>Netherl -3</b>	80 <sup>3</sup>	10,135
						<b>EU-889</b>		
2010 <sup>1</sup>	2,245	-	293	6,414	831	<b>Lithu -457</b>	79 <sup>3</sup>	11,751
						<b>Latvia-243</b>		

<sup>1</sup> Provisional figures. <sup>2</sup> Including 1414 tonnes in Division IIb not split by country. <sup>3</sup> UK(E&W)+UK(Scot.)

**Table 3.4.5.3** Beaked redfish (*Sebastes mentella*) in Subareas I and II. Nominal catch (t) by countries in the pelagic fishery in international waters in Division IIa. These catches are also included in Table 3.4.5.2.

Year	Can	Estonia	Faroe Islands	France	Germany	Iceland	Latvia	Lithuania
2002					9			
2003					40			
2004			500		2			
2005			1,083		20			
2006	433	396	3,766	192	2,475	2,510 <sup>2</sup>	341	845
2007	-	684	1,968 <sup>2</sup>	226	497	1,579 <sup>2</sup>	349	785
2008	-	-	1,797 <sup>2</sup>	-	-	-	267	117
2009	-	-	1,253	-	-	-	-	-
2010 <sup>1</sup>	-	-	912	-	-	-	243	457

Year	Norway	Poland	Portugal	Russia	Spain	UK	Total
2002							9
2003							40
2004				1,510			2,012
2005				3,299			4,402
2006	2,862	2,447	1,697	9,390	575	841	28,770
2007	1,813 <sup>2</sup>	1,079	1,377	3,645	2,155	-	16,157
2008	330 <sup>2</sup>	-	641	4,901	390 <sup>1</sup>	EU <sup>3</sup>	8,443
2009	-	337	701	1,975	135	889	5,290
2010 <sup>1</sup>	450	-	244	5,103	820		8,229

<sup>1</sup> Provisional figures.

<sup>2</sup> As reported to NEAFC

<sup>3</sup> EU not split by country.