

### 3.13.6

### Black scabbardfish (*Aphanopus carbo*)

**State of the stock/exploitation:** The stock structure of this species is still unknown. CPUE trends differ between the northern Subareas V, VI, VII, and XII and Subareas VIII and IX. In the northern areas trawl CPUE shows a consistent decline to a historically low level in 1999, a slight increase in 2000, and then a very considerable increase in 2001. While it is possible that this increase reflects some improvement in stock status, it is unlikely that the magnitude of the increase between 2000 and 2001 reflects a corresponding increase in stock abundance. CPUE data from the longliners in Division IXa suggest that the abundance in the southern area has remained relatively stable during the past decade, but the fishery has expanded its area of operation and this could be contributing to maintaining the catch rates.

**Advice on management:** ICES recommends a significant reduction in the fishing effort in the northern areas. The contradicting trends of the CPUE series make it difficult to advise on the need for effort reduction in the southern area, but certainly no expansion of the effort should be allowed and fisheries should not be allowed to expand until reliable assessments indicate that increased harvests are sustainable.

**Relevant factors to be considered in management:** It should be noted that black scabbardfish is caught in two very different fisheries, in waters off the Mainland of Portugal (Division IXa) and to the west of the British Isles. In the waters off Mainland of Portugal it is taken in a targeted artisanal longline fishery and CPUE data have been relatively stable over the years. To the west of the British Isles it is taken in a mixed species, mainly French trawl fishery along with roundnose grenadier and sharks.

**Comparison with previous assessment and advice:** No reliable analytical assessment of black scabbardfish was made in 2002.

**Elaboration and special comment:** Landings in Table 3.13.6.1. French trawl CPUE and longline CPUE data series are presented in Figures 3.13.6.1 and 3.13.6.2, respectively.

The advice of this year is based on fleets whose dynamics do not appear to be the same, and whether these fleets explain the different stock structure remains unknown.

There is detailed information available on the “artisanal” fishery in Subarea IX. CPUE from this fishery is unlikely to reflect stock trends because the fishery is very localised. CPUE data from the more recently developed fishery in the northern areas are presented in Figure 3.13.6.1, but data of the effort exerted and the geographical distribution of effort over time are missing. Therefore, its validity as a stock indicator is also unknown. In addition, time-series of the size distribution of landings would be very useful.

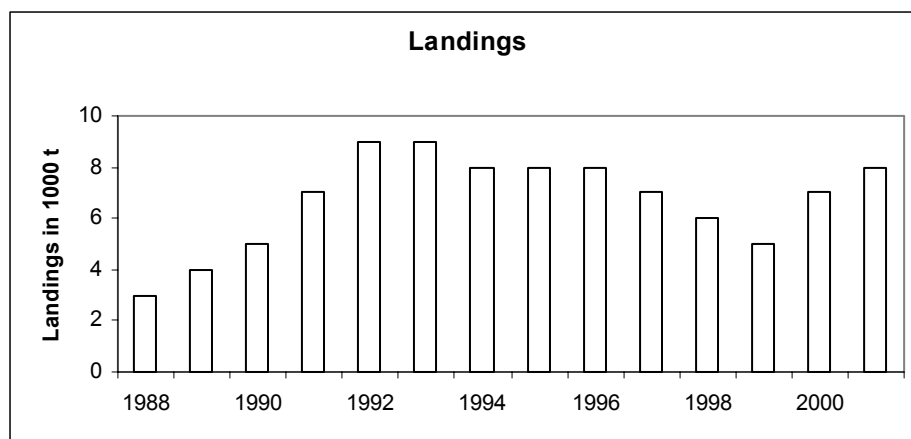
**Source of information:** Report of the Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources, 4–10 April 2002 (ICES CM 2002/ACFM:16).

**Catch data (Table 3.13.6.1):**

Year	ACFM catch
1988	3
1989	4
1990	5
1991	7
1992	9
1993	9
1994	8
1995	8
1996	8
1997	7
1998	6
1999	5
2000	7
2001*	8

\*Preliminary. Weights in '000 t.

Black scabbardfish (*Aphanopus carbo*)



**Table 3.13.6.1** Black scabbardfish (*Aphanopus carbo*). Working Group estimates of landings (tonnes).**Black scabbardfish in Subareas III and IV**

Year	France	Germany	Scotland	E&W&NI	Total
1988	2	-	-	-	2
1989	0	-	-	-	0
1990	57	-	-	-	57
1991	0	-	-	-	0
1992	0	-	-	-	0
1993	0	-	-	-	0
1994	13	3	-	-	16
1995	-	-	2	-	2
1996	3	-	1	-	4
1997	0	-	2	-	2
1998	-	-	9	-	9
1999	4	-	3	-	6
2000	2	0	3	-	5
2001*	1	0	10	1	12

\* Preliminary.

**Black scabbardfish in Division Va**

Year	Iceland	Total
1988	-	0
1989	-	0
1990	-	0
1991	-	0
1992	-	0
1993	0	0
1994	1	1
1995	+	+
1996	0	0
1997	1	1
1998	0	0
1999	9	9
2000	18	18
2001*	8	8

\* Preliminary. Continued ...

**Table 3.13.6.1** Continued

**Black scabbardfish in Division Vb**

Year	Faroës	France	Germany	Scotland	E&W&NI	Total
1988	-	-	-	-	-	0
1989	-	166	-	-	-	166
1990	12	407	-	-	-	419
1991	1	151	-	-	-	152
1992	4	29	-	-	-	33
1993	202	76	9	-	-	287
1994	114	45	1	-	-	160
1995	249	175	-	-	-	424
1996	57	129	-	-	-	186
1997	18	50	-	-	-	68
1998	36	144	-	-	-	180
1999	31	135	-	6	-	172
2000	117	186	0	9	-	313
2001*	189	371	0	20	0	581

\* Preliminary.

**Black scabbardfish in Subareas VI and VII**

Year	Faroës	France	Germany	Ireland	Spain	Scotland	E&W&NI	Total
1988								0
1989	46	108						154
1990		1060						1060
1991		2759						2759
1992	3	3433						3436
1993	62	3411	48	8				3529
1994		3050	46	3		2		3101
1995		3257	3			18		3278
1996		3650	2			36	1	3689
1997	3	2754		0	1	235	2	2995
1998		1815		0	3	148	1	1967
1999		1973		1	0	191	1	2166
2000		3235	0	59	1	377	40	3712
2001*		3692	0	68	158	673	34	4625

\* Preliminary.

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**Table 3.13.6.1** Continued

**Black scabbardfish in Subareas VIII and IX**

Year	France	Portugal	Spain	Total
1988	-	2,602	-	2,602
1989	-	3,473	-	3,473
1990	0	3,274	-	3,274
1991	1	3,978	-	3,979
1992	0	4,389	-	4,389
1993	0	4,513	-	4,513
1994	0	3,429	-	3,429
1995	-	4,272	-	4,272
1996	126	3,686	3	3,815
1997	2	3,553	1	3,556
1998	2	3,147	3	3,152
1999	11	2,741	0	2,752
2000	32	2,371	1	2,404
2001*	22	2,744	1	2,767

\* Preliminary.

**Black scabbardfish in Subarea X**

Year	Faroës	Portugal	France	Total
1988	-	-	-	0
1989	-	-	-	0
1990	-	-	-	0
1991	-	166	-	166
1992	370	-	-	370
1993	-	2	-	2
1994	-	-	-	0
1995	-	3	-	3
1996	11	0	-	11
1997	3	0	-	3
1998	31	68	-	99
1999	-	46	66	112
2000	-	112	1	113
2001*	-	0	0	0

\* Preliminary.

Continued ...

**Table 3.13.6.1** Continued

**Black scabbardfish in Subarea XII**

Year	Faroes	France	Germany	Spain	Scotland	Total
1988	-	-	-	-	-	0
1989	-	-	-	-	-	0
1990	-	-	-	-	-	0
1991	-	-	-	-	-	0
1992	-	512	-	-	-	512
1993	1051	-	93	-	-	1,144
1994	779	-	45	-	-	824
1995	301 <sup>(1)</sup>	-	-	-	-	301
1996	187	4	-	253	-	444
1997	102	-	-	98	-	200
1998	20	-	-	134	-	154
1999	-	3	-	109	0	112
2000	1	6	0	237	-	244
2001	-	3	0	159	-	162

\* Preliminary. <sup>(1)</sup> Includes VIb.

**Black scabbardfish in Subarea XIV**

Year	Faroes	Spain	Total
1988	-	-	0
1989	-	-	0
1990	-	-	0
1991	-	-	0
1992	-	-	0
1993	-	-	0
1994	-	-	0
1995	-	-	0
1996	-	-	0
1997	-	-	0
1998	2	-	2
1999	-	-	0
2000	-	90	90
2001	-	12	12

\* Preliminary.

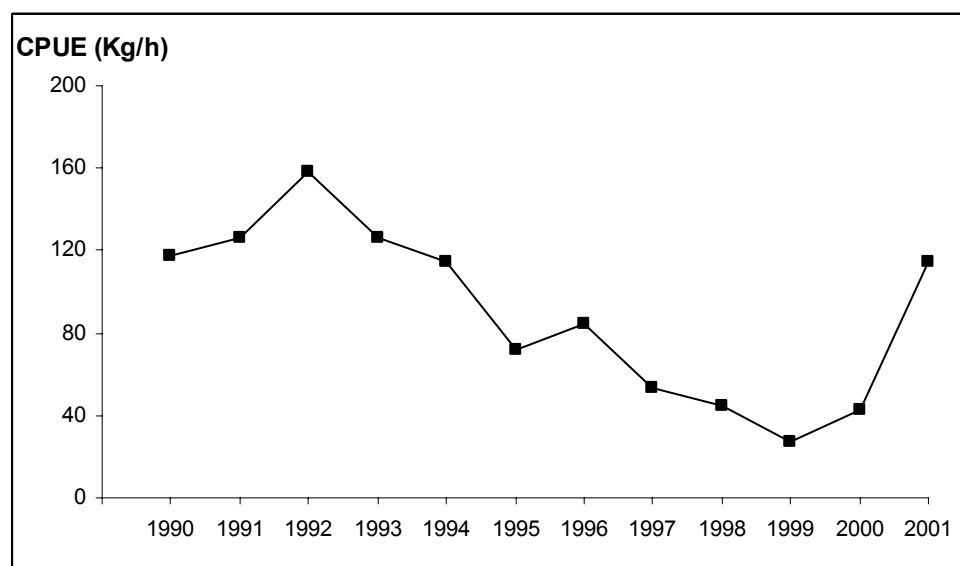
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**Table 3.13.6.1** Continued

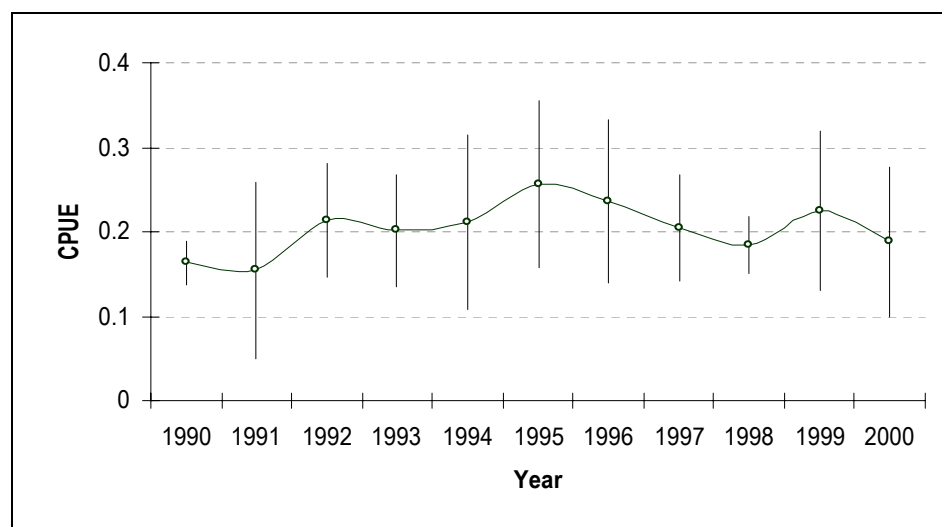
**BLACK SCABBARDFISH - Total landings by area/division and grand total**

Year	III & IV	Va	Vb	VI & VII	VIII & IX	XII	XIV	Total
1988	2	0	0	0	2,602	0	0	2,604
1989	0	0	166	154	3,473	0	0	3,793
1990	57	0	419	1,060	3,274	0	0	4,810
1991	0	0	152	2,759	3,979	0	0	6,890
1992	0	0	33	3,436	4,389	512	0	8,370
1993	0	0	287	3,529	4,513	1,144	0	9,473
1994	16	1	160	3,101	3,429	824	0	7,531
1995	2	+	424	3,278	4,272	301	0	8,277
1996	4	0	186	3,689	3,815	444	0	8,138
1997	2	1	68	2,995	3,556	200	0	6,822
1998	9	0	180	1,967	3,152	154	2	5,464
1999	6	9	172	2,166	2,752	112	0	5,217
2000	5	18	313	3,712	2,404	244	90	6,786
2001*	12	8	581	4,625	2,767	162	12	8,166

\* Preliminary.



**Figure 3.13.6.1** French trawl CPUE data series for combined ICES Subareas V, VI and VII (1990–2001).



**Figure 3.13.6.2** Annual CPUE average estimates from longline fishery in ICES Subarea IXa (1990 and 2000).