

### 3.13.8

#### Orange roughy (*Hoplostethus atlanticus*)

**State of the stock/exploitation:** The last analytical assessment for orange roughy in Subarea VI was carried out in 2000. Based on updated CPUE data it is concluded that orange roughy in Subarea VI is outside safe biological limits. The catch has been very low since 1993 and the stock is depleted. The lack of development of this fishery in the most recent years suggests that this stock has not shown any sign of recovery. Moreover, the remaining catches in the area are likely to adversely affect the recovery of the stock. The situation in Subarea VII is highly uncertain. International landings have increased while catch rates have stabilised in recent years, but these features may reflect the sequential discovery and subsequent fishing of previously unexploited aggregations. The state of orange roughy in other areas is unknown. CPUE trends are shown in Figure 3.13.8.1.

**Advice on management:** Orange roughy stocks cannot sustain high rates of exploitation. Newly-discovered aggregations are often overexploited before enough information is available to provide timely advice on management. Considering recent observations on the fishery developments, the exploitation of orange roughy should be strictly limited and the stocks/populations closely monitored. Data obtained should be incorporated into appropriate management measures. These recommendations should also apply to areas where there is currently no exploitation on orange roughy. There should be no directed fishery in Subarea VI.

**Relevant factors to be considered in management:** Orange roughy are known to grow to be very old (estimated > 100 years). Another biological characteristic of this species is that it aggregates in local concentrations. Experience in other areas (e.g. South

Pacific) has shown that these characteristics make this species especially vulnerable to exploitation. There is concern that the fleets may exploit local aggregations one after the other. Once an aggregation is fished out, these fleets could explore and harvest other concentrations. In that context, the CPUE of such fleets would not reflect the subsequent depletion of the overall stock.

**Elaboration and special comment:** There are currently four fisheries for orange roughy in the Northeast Atlantic. The main fishery up to 2000 was conducted by French trawlers in Subareas VI and VII. In 2001, an Irish fishery has rapidly developed in Subarea VII, taking the bulk of the landings (2 400 t). The other fisheries include a Faroese fleet, which mainly operates in Division Vb and international waters (Hatton Bank and mid-Atlantic ridge) and a small Icelandic coastal fleet conducted in Division Va. The French fishery in Subarea VI started in 1991 and, after an initial peak of 3 500 t, landings declined rapidly to less than 200 t per annum. French landings in Subarea VII peaked in 1992 at around 3 100 t and in recent years have stabilised at around 1 000 t per annum. The main fishery is on spawning aggregations.

Landings by Subarea/Division and nation are given in Tables 3.13.8.1.

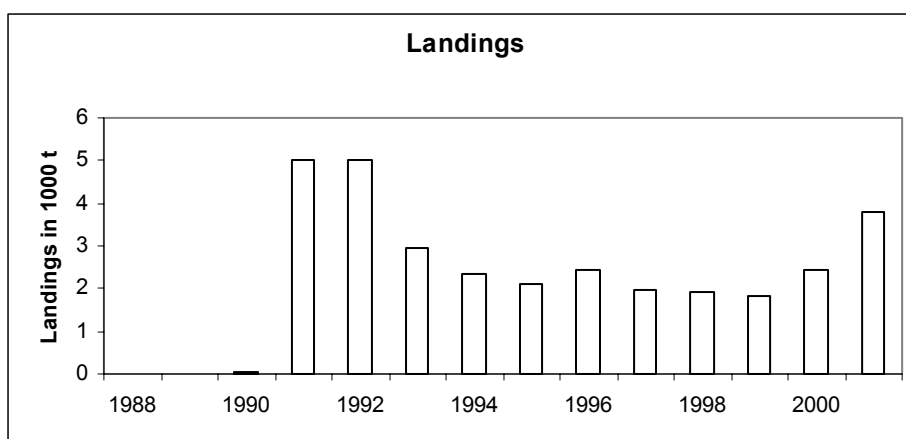
**Source of information:** Report of the Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources, 4–10 April 2002 (ICES CM 2002/ACFM:16).

**Catch data (Table 3.13.8.1):**

Year	ACFM Catch
1988	0
1989	+
1990	+
1991	5
1992	5
1993	3
1994	2
1995	2
1996	2
1997	2
1998	2
1999	2
2000	2
2001*	4

\*Preliminary. Weights in '000 t.

Orange roughy (*Hoplostethus atlanticus*)



**Table 3.13.8.1** Orange roughy (*Hoplostethus atlanticus*). Working Group estimates of landings (tonnes).**Orange roughy in Division Va**

Year	Iceland	Total
1988	-	0
1989	-	0
1990	-	0
1991	65	65
1992	382	382
1993	717	717
1994	158	158
1995	64	64
1996	40	40
1997	79	79
1998	28	28
1999	14	14
2000	68	68
2001*	19	19

\*Preliminary.

**Orange roughy in Division Vb**

Year	Faroes	France	Total
1988	-	-	0
1989	-	-	0
1990	-	22	22
1991	-	48	48
1992	1	12	13
1993	36	1	37
1994	170	+	170
1995	419	1	420
1996	77	2	79
1997	17	1	18
1998	-	3	3
1999	4	1	5
2000	155	0	155
2001*	1	4	5

\*Preliminary.

Continued ...

**Table 3.13.8.1** Continued

**Orange roughy in Subarea VI**

Year	Faroes	France	E & W	Scotland	Ireland	Spain	Total
1988	-	-	-	-	-	-	0
1989	-	5	-	-	-	-	5
1990	-	15	-	-	-	-	15
1991	-	3,502	-	-	-	-	3,502
1992	-	1,422	-	-	-	-	1,422
1993	-	429	-	-	-	-	429
1994	-	179	-	-	-	-	179
1995	40	74	-	2	-	-	116
1996	0	116	-	0	-	-	116
1997	29	116	1	-	-	-	146
1998	-	100	-	-	-	2	102
1999	-	175	-	-	0	1	176
2000	-	136	-	-	2	-	138
2001*	-	159	-	11	110	-	280

\* Preliminary.

**Orange roughy in Subarea VII**

Year	France	Spain	E & W	Ireland	Scotland	Total
1988	-	-	-	-	-	0
1989	3	-	-	-	-	3
1990	2	-	-	-	-	2
1991	1,406	-	-	-	-	1,406
1992	3,101	-	-	-	-	3,101
1993	1,668	-	-	-	-	1,668
1994	1,722	-	-	-	-	1,722
1995	831	-	-	-	-	831
1996	879	-	-	-	-	879
1997	893	-	-	-	-	893
1998	963	6	-	-	-	969
1999	1,157	4	-	-	-	1,161
2000	1,019	-	729	1	-	1,749
2001*	1,022	-	-	2,367	22	3,411

\*Preliminary.

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**Table 3.13.8.1** Continued**Orange roughy in Subarea VIII**

Year	France	Spain VIII&IX	E & W	Total
1988	-	-	-	0
1989	0	-	-	0
1990	0	-	-	0
1991	0	-	-	0
1992	83	-	-	83
1993	68	-	-	68
1994	31	-	-	31
1995	7	-	-	7
1996	22	-	-	22
1997	1	22	-	23
1998	4	10	-	14
1999	33	6	-	39
2000	47	-	5	52
2001*	20	-	-	20

\*Preliminary.

**Orange roughy in Subarea IX**

Year	Spain	Total
1988	-	0
1989	-	0
1990	-	0
1991	-	0
1992	-	0
1993	-	0
1994	-	0
1995	-	0
1996	-	0
1997	1	1
1998	1	1
1999	1	1
2000	0	0
2001*	0	0

\*Preliminary.

Continued ...

**Table 3.13.8.1** Continued

**Orange roughy in Subarea X**

Year	Faroes	France	Norway	E & W	Portugal	Total
1988	-		-	-	-	0
1989	-	-	-	-	-	0
1990	-	-	-	-	-	0
1991	-	-	-	-	-	0
1992	-	-	-	-	-	0
1993	-	-	1	-	-	1
1994	-	-	-	-	-	0
1995	-	-	-	-	-	0
1996	470	1	-	-	-	471
1997	6	-	-	-	-	6
1998	177	-	-	-	-	177
1999	-	10	-	-	-	10
2000	-	3	-	28	157	188
2001*	-	-	-	28	-	28

\*Preliminary.

**Orange roughy in Subarea XII**

Year	Faroes	France	Iceland	Spain	E & W	Total
1988	-	-	-	-	-	0
1989	-	0	-	-	-	0
1990	-	0	-	-	-	0
1991	-	0	-	-	-	0
1992	-	8	-	-	-	8
1993	24	8	-	-	-	32
1994	89	4	-	-	-	93
1995	580	96	-	-	-	676
1996	779	36	3	-	-	818
1997	802	6	-	-	-	808
1998	570	59	-	-	-	629
1999	345	43	-	43	-	431
2000	69	21	-	-	2	92
2001*	-	14	-	-	2	16

\*Preliminary.

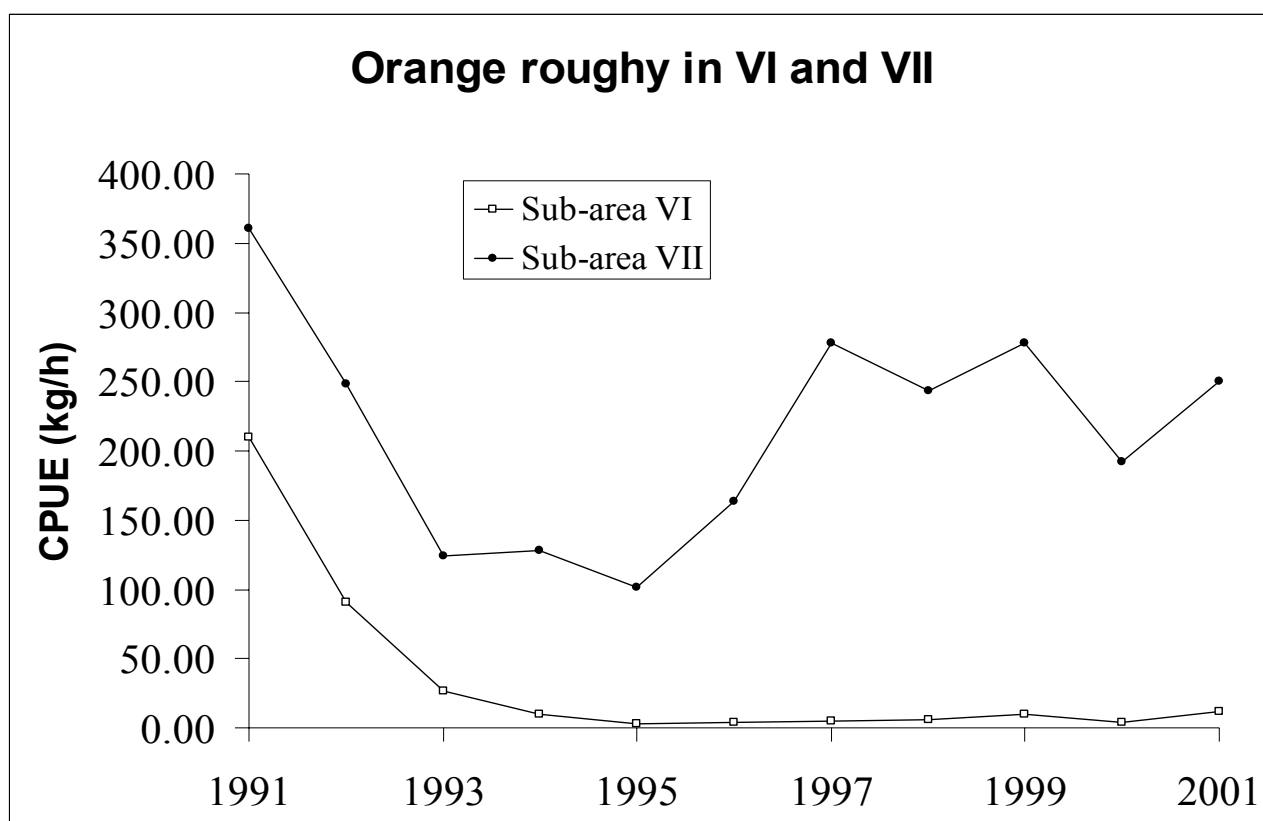
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Table3.13.8.1 Continued

**ORANGE ROUGHY - Total landings by area/division and grand total**

Year	Va	Vb	VI	VII	VIII	X	XII	Total
1988	0	0	0	0	0	0	0	0
1989	0	0	5	3	0	0	0	8
1990	0	22	15	2	0	0	0	39
1991	65	48	3,502	1,406	0	0	0	5,021
1992	382	13	1,422	3,101	83	0	8	5,009
1993	717	37	429	1,668	68	1	32	2,952
1994	158	170	179	1,722	31	0	93	2,353
1995	64	420	116	831	7	0	676	2,114
1996	40	79	116	879	22	471	818	2,425
1997	79	18	146	893	23	6	808	1,973
1998	28	3	102	969	14	177	629	1,922
1999	14	5	176	1,161	39	10	431	1,836
2000	68	155	138	1,749	52	188	92	2,442
2001*	19	5	280	3,411	20	28	16	3,779

\*Preliminary.

**Figure 3.13.8.1** CPUE (kg/h) from the French reference fleet in Subareas VI and VII.