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Portuguese Research Report, 1985

by

M. L. Godinho

Instituto Nacional de Investigacao das Pescas, Alges-Praia  
1400 Lisbon, Portugal

During 1985 the Portuguese fleet operated in Subareas 3 and 4 of the Northwest Atlantic. The present paper summarizes the nominal catches caught and the biological information collected on board of a commercial otter trawl.

A. Status of the Fisheries

The total nominal catches reached 15849 tons which represents a decrease of 2695 tons from 1984 to 1985 (Table 1). The nominal catches of the main species, by division and subarea, are presented in Table 2 (from available statistics).

B. Special Research Studies

1. Environmental studies

No environmental studies were carried out.

2. Biological studies

Cod - Division 3M

Samples were taken in March. A total of 335 fishes were measured and weighted and 127 aged. Length composition is presented in Table 3 and the age/length key obtained is contained in Table 4.

The catches were dominated by the 1981 year-class (59.8%), with a total mean length of 43.9 cm, followed by the 1980 one (29.6%) with 51.6 cm.

Near all cod caught had gonads in a developing stage.

Cod - Divisions 3N, 3L and 3O

For these divisions, sampling data are available only for length composition and are presented in Table 3. No information is available for age composition.

Redfish - Divisions 3M, 3N, 3L and 3O

Only length compositions are available for redfish in these divisions. The results are presented in Table 5.

Table 1. Portuguese nominal catches (mt) of species in the NAFO Area for 1983-85.

Species	1983	1984	1985
Atlantic cod	11837	11170	10085
Atlantic red fish	1869	2918	2278
White hake	2156	2495	1881
Silver hake	378	1714	1338
Others	2304	242	267
<b>Total</b>	<b>16587</b>	<b>18544</b>	<b>15849</b>

Table 2. Portuguese nominal catches (mt) of species by divisions of Subareas 3 and 4, 1985.

Species	3K	3L	3M	3N	3O	4V <sub>s</sub>	4W
Atlantic cod	1445	2786	4376	195	413	870	-
Atlantic redfish	81	1	1306	890	-	-	-
White hake	-	-	-	-	1881	-	-
Silver hake	-	-	-	-	-	-	1338
Others	-	1	266	-	-	-	-
<b>Total</b>	<b>1526</b>	<b>2788</b>	<b>5948</b>	<b>1085</b>	<b>2294</b>	<b>870</b>	<b>1338</b>

Table 3. Length composition of cod sampled.

Length (LT cm)	3M March	3N March	3L March	March	30 April
18					4,7
21					-
24		3,7	4,2		14,2
27	3,0	6,1	17,5		227,5
30	6,0	34,3	30,0		440,8
33	17,9	50,2	50,0		232,2
36	26,9	79,6	72,4		42,7
39	98,5	93,0	90,8		28,4
42	170,1	133,4	109,9		4,7
45	164,2	133,4	103,2		-
48	158,2	88,1	113,2	50,0	-
51	101,5	83,2	93,3	12,5	-
54	86,6	74,7	86,6	12,5	-
57	32,8	53,9	69,1	62,5	-
60	44,8	40,4	51,6	62,5	-
63	17,9	44,1	50,0	50,0	-
66	11,9	41,6	26,6	37,5	-
69	6,0	22,0	13,3	75,0	-
72	14,9	8,7	6,7	37,5	-
75	17,9	4,9	3,3	137,5	4,7
78	11,9	-	5,0	50,0	-
81	3,0	-	0,8	87,5	-
84	-	2,4	1,7	100,0	-
87	3,0	2,4	-	37,5	-
90	-	-	0,8	37,5	-
93	3,0	-	-	62,5	-
96	-	-	-	25,0	-
99	-	-	-	-	-
102	-	-	-	-	-
105	-	-	-	50,0	-
108	-	-	-	-	-
111	-	-	-	-	-
114	-	-	-	-	-
117	-	-	-	-	-
120	-	-	-	-	-
123	-	-	-	-	-
126	-	-	-	12,5	-
<b>Total</b>	1000	1000,1	1000	1000	999,9
<b>Mean length (LT mm)</b>	496	485	477	769	317
<b>N° fish measured</b>	335	817	1021	80	95
<b>N° samples</b>	3	8	17	1	1

Table 4. Age Length Key for Cod-Division 3M, March 1985.

Total Length (cm)	III	IV	V	VI	VII	VIII	IX	No. Aged
18								
21								
24								
27	1							1
30	-	2						2
33	-	6						6
36	2	5						7
39		10						10
42		3	1					4
45		10	2					12
48		11	3					14
51		7	6					13
54		2	10					12
57			9					9
60			8	3				11
63			1	4				5
66			1	3				4
69				2				2
72				3	1			4
75				2	2			4
78					5			5
81					-			-
84					-			-
87					1			1
90								-
93								-
96							1	1
Total	3	56	41	17	9	-	1	127
%	11.0	59.8	29.6	6.1	2.8	-	0.3	99.7
Total mean length (cm)	33.5	43.9	51.6	66.8	77.1		93.0	
Total mean weight (gr)	283	698	1516	2797	4439		8000	

Table 5. Length composition of redfish.

Length	3M		3N		3L	30	
	March	April	March	April	April	March	April
10							
1							
2							
3							
4							
5						3.1	2.0
6	14.2					18.6	6.5
7	35.4					34.1	15.5
8	28.4					55.7	39.4
9	7.1					85.1	37.4
20	21.3	3.8		3.5		88.2	56.4
1	14.2	-		7.1		57.3	44.4
2	35.4	-		7.1		51.1	61.9
3	28.4	-	2.5	53.2		147.1	167.2
4	21.3	-	3.7	67.4	12.0	140.9	162.7
5	42.6	3.8	6.2	81.6	8.0	131.6	170.7
6	63.8	3.8	12.4	70.9	12.0	92.9	89.8
7	56.7	33.8	22.3	78.4	40.2	46.4	44.4
8	42.6	75.2	29.7	99.3	44.2	21.7	33.9
9	42.6	82.7	48.3	81.6	48.2	15.5	18.5
30	42.6	124.1	96.5	120.6	44.2	6.2	15.5
1	28.4	82.7	132.4	88.7	112.5	3.1	5.0
2	42.6	48.9	189.4	53.2	108.4		6.5
3	85.1	112.8	142.3	46.1	152.6		6.5
4	35.4	78.9	99.0	17.7	144.6		7.5
5	49.6	75.2	78.0	21.3	124.5		4.5
6	86.7	82.6	33.4	17.7	72.3		1.5
7	42.6	48.9	27.2	14.2	44.2		1.0
8	49.6	52.6	21.0	24.8	16.1		0.5
9	42.6	30.1	16.1	17.7	4.0		-
40	28.4	37.6	14.9	3.5	8.0		0.5
1	14.2	18.8	7.4	-	4.0		0.5
2	28.4	3.8	5.0	21.3			
3		15.0	6.2	-			
4		11.3	3.7	-			
5		-	1.2	3.5			
6		3.8	1.2				
Total	1000.2	1000.2	1000.0	1000.0	1000.0	1000.1	1000.2
Mean length (mm)	302	332	326	293	326	227	240
No. fish meas.	141	266	808	282	249	646	2004
No. of samples	1	2	5	2	2	5	15