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by

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INTRODUCTION

In 1984 the GDR overall nominal catch in the NAFO-area amounted to 13 694.5 tons. The total yield taken by GDR fleet amounted to about 4 700 tons more than in 1983 (Table 1). In 1984 the overall nominal catch amounted to about 63 per cent in comparison with 1983, and to about 167 per cent in comparison with 1982. In 1984 the basis of this further increase are the better fishing results of roundnose-grenadier (about 1 000 tons more than in 1983) in the subarea 3, and of mackerel (about 4 100 tons more than in 1983) in subarea 6.

As in 1983 the fisheries were carried out in NAFO-subareas 2, 3, and 6. In addition the subarea 4 was fished.

The main species in the catches were Atlantic mackerel, roundnose grenadier, Greenland halibut and redfish. However these main species are representing about 95 per cent of the GDR overall nominal catch in the NAFO-area in 1984.

First time a directed fishery on silver hake was carried out in Division 4 W by GDR fleet.

Subareas 2 and 3

A Status of the Fisheries

The fishery was carried out by sterntrawlers of the type "Zubringer-Trawler" (FAO-code 900-999,9 BRT) only. In the whole area the bottom trawl-fishery was carried out only. Based upon the biological, organizing experiences, and the know-how of the last years the time table of fishery of GDR fleet was the following:

- directed redfish fishery in the Division 3 L from September 1oth till September 24th

- directed roundnose grenadier fishery in the Subareas 2 and 3 from Setember 25th till December 19th

- directed codfishery in the Divisions 2 G and 2 H on December 20th and December 21st, respectively

- directed roundnose grenadier fishery in the Subareas 2 and 3 from December 22nd till December 29th.

Also in 1984 the fishery activities were strongly connected with the quota regulations in previous years, therefore the catches don't reflect the situations and variations of stocks.

In the NAFO-papers SCS Doc. 84/IX/24, and SCR Doc 84/IX/96 it was already pointed at the seasonal characteristics of fishery and the influence of hydrological parameters on the yield.

1. Redfish

Based upon the traditional experiences the directed redfish-fishery was carried out in the area of the general-position 48°00'N and 48°00'W. The catches were stable, therefore the quota was realized during the planed fishing time. The redfish was caught by bottom trawl in 300-500 m. The c.p.u.e. (catch per fishing day) amounted to 17.5 tons in average (September 10th - 24th). The portion of redfish amounted to an average of 70 per cent. Main species of by-catch were skates, cod, roundnose grenadier, and Greenland halibut.

In Subarea 2 and 3 redfish was by-catch in the directed roundnose grenadier fishery during the period of September/December. The proportion of by-catch of redfish amounted to an average of 7 per cent in the directed grenadier fishery.

During a short period a directed redfish fishery was carried out in the division 3 K by means of bottom trawl (300-600 m) around October 20th.

2. Roundnose grenadier/Greenland halibut

Corresponding to the experiences of fishery and to the biological conditions of the last years the directed roundnose grenadier fishery was started on the position 51°N, 50° W on September 25th (NAFO-Division 3 K). The catches were succesful (Table 2). Therefore a change of fishing ground was not necessary. The fishing depths shifted from 500 to 1450 m during the fishing time. The proportion of roundnose grenadier amounted to about 90 per cent (Table 3). Main species of by-catch were Baird's smoothead, blue antimora. The results of catches decreased in the division 3 K from the middle of October. Therefore the

fleet changed northwards to the division 2 H in October 22nd.

In this area the fishery were carried out in 500-1000 m. The expectations of fishery were not realized in this fishing ground and during this period.

From November 13th till December 13th the directed roundnose grenadier fishery was more and more stable. The best results were reached in a fishery depths of about 1000 m. Due to the decrease of concentrations of roundnose grenadier, but especially depending on the level of immigration of Greenland halibut into the fishing ground and fishing depths the composition of catch was determined by Greenland halibut visibly (Tables 3 and 5 A - 4 E).

As in 1983 with the increase of Greenland halibut the by-catch of proportion of northern wolffish (Anarrhichas latifrons) increased too. In the connection with the by-catch levels of Greenland halibut, and northern wolffish in the roundnose grenadier directed fishery we are pointing to the SCR-Doc. 84/IX/96, which were cited already.

3. Cod

As in 1983 a specialized cod fishery was planed in Division 2 G, and 2 H according to the regulation of quota in December. It was tried to start the cod fishery on December 19th.

Strong ice conditions in Divisions 2 G and 2 H prevented a codfishery. However several testtrawls were carried out without fishing results outside of the known catch positions of cod.

B Special Research Studies

1. Environmental studies

   No data

2. Biological Studies

   Redfish (S. mentella)

   Biological samples of Division 3 K (length, weight, age) were taken on board of a commercial vessel during the redfish directed fishery on October 21st and 22nd and on November 11th respectively. The age reading was carried out by scales, respectively otoliths. Results of investigations are given in Tables 5 and 6.

   The total-range of length amounted to from 20 up to 40 cm and the main range of length amounted to from 23 up to 32 cm in the commercial catches taken in the Division 3 L during the redfish directed fishery from September 10th till September 24th.

Roundnose grenadier

In October, November, and December length- (anal fin length) age-, and weight data were collected on board of commercial vessels in the Divisions 3 K ((period from October 14th up to 20th) and 2 H (period from October 25th up to December 3rd).

At present the age samplings are analyzed and determined. Scales are used for ageing only.

Size compositions of rn-grenadier in catches taken by commercial bottom trawls in the Divisions 3 K and 2 H are given in tables 7, 8 and 9.

Greenland halibut

Length-, age-, and weight data were collected on board commercial vessels in Subarea 2 during the period from October till December (Table 10). These data were collected during the rn-grenadier directed fishery. At present age samplings (scales only) were analyzed and determined. Results will be send to the NAFO-Secretariat as soon as possible.

Subarea 4

A Status of the Fishery

A test fishery of silver hake was carried out by two factory ships (FAO-code 2000-2999.9 BRT) in the first decade of May. First time this fishery was done, therefore first experiences are available only. The c.p.u.e. (catch per day) ranged from zero to 13 tons. There are some problems of fish processing because the silver hake was small (total length 18-33 cm, main length 18-29 cm).

Subareas 5 and 6

A Status of the Fishery

Atlantic mackerel

A directed mackerel fishery was carried out by factory ships (FAO-code 2000-2999.9 BRT)in the Divisions 5 Zw, 6 A and 6 B from January to April. The c.p.u.e. (average of catch per hour) amounted to

12.8 tons in January
16.7 tons in February
9.2 tons in March
7.6 tons in April

A total catch per hour of 10.8 tons was reached. In January the profitable c.p.u.e. were obtained.

A total catch per hour of 10.8 tons was reached. In January the profitable c.p.u.e. were obtained.

Only temporarily the indications of the echo sounder were fished but nevertheless with successful gains. The mackerel shoals were very quick and migrated into the onshore areas frequently.

From January to March the fishery was carried out prevailing in a range from 20 m to 40 m. In April partly in March too, the catch positions were deeper (between 70 and 120 m). In all months the main catch positions extended to the area between the latitudes 38°N and 39°N from the 20-sm-boundary up to a depth of 120 m.

B Special Research Studies

1. Environmental studies

No data

2. Biological studies

Atlantic mackerel:

During the fishing period samples were collected on board commercial vessels. They were analyzed in the laboratory of the institute for length-, weight data and age reading material (otoliths).

Results of investigations are given in Tables 12 and 13.

Table 1: GDR nominal catches (tons) of species in the NAFO-area for 1983 and 1984

Art	1983	1984
Cod	127.8	77.3
Redfish	1252.1	1431.5
Roundnose grenadier	2585.5	3649.6
Greenland halibut	2590.2	2498.3
American plaice	33.8	-
NW-atlantik eelpouts	15.2	0.5
Northern wolffish	7.9	1.7
Skates	261.1	354.8
Greenland sharke	16.0	19.5
Red and white hakes	18.3	0.7
Catfish	13.2	-
Baird's smoothead	92.4	58.9
Atlantic mackerel	1314.5	5450.3
Alewife	5,8	7.5
Spiny dogfish	7.8	2.4
Witch	50.4	27.7
Squid	0.2	0.1
Silver hake	-	93.1
Blue antimora	-	18.7
Haddock	-	0.6
Pollock	-	1.0
Tusk	-	0.2
Atlantic herring	-	0.2
Soup	-	0.2
Total	8392.2	13694.5

Table 2: GDR nominal catches (tons) of species by divisions of Subarea 2, 3, 4 and 6 for 1984

Species	2	2G	2H	2J	3	3K	3L	3M	4W	6	6A	6B
Cod	7.5	-	0.1	7.4	69.8	14.8	55.0	-	-	-	-	-
Redfish	172.7	1.0	48.4	123.3	1258.8	312.3	848.6	97.9	-	-	-	-
rn-grenadier	264.2	3.9	259.3	1.0	3385.4	3296.7	88.1	0.6	-	-	-	-
Greenland halibut	2260.6	6.6	2250.3	3.7	237.7	197.0	40.5	0.2	-	-	-	-
NW-atlantic eelpouts	-	-	-	-	0.5	-	0.5	-	-	-	-	-
Catfish	0.1	-	0.1	-	1.6	-	1.6	-	-	-	-	-
Skates	176.7	0.3	176.3	0.1	178.1	23.5	154.1	0.5	-	-	-	-
Greenland shark	17.4	-	16.2	1.2	1.8	1.8	-	-	-	-	-	-
Red and white hakes	-	-	-	-	0.4	0.4	-	-	0.3	-	-	-
Baird's smoothead	2.4	-	2.4	-	56.5	56.5	-	-	-	-	-	-
Atlantic mackerel	-	-	-	-	-	-	-	-	-	5450.3	253.9	5196.4
Alewife	-	-	-	-	-	-	-	-	-	7.5	1.9	5.6
Spiny dogfish	-	-	-	-	-	-	-	-	0.5	1.9	-	1.9
Witch	0.3	-	-	0.3	27.4	3.2	24.2	-	-	-	-	-
Squid	-	-	-	-	-	-	-	-	0.1	-	-	-
Silver hake	-	-	-	-	-	-	-	-	93.0	0.1	-	0.1
Blue antimora	-	-	-	-	18.7	18.7	-	-	-	-	-	-
Haddock	-	-	-	-	-	-	-	-	0.6	-	-	-
Pollock	-	-	-	-	-	-	-	-	1.0	-	-	-
Tusk	-	-	-	-	-	-	-	-	0.2	-	-	-
Atlantic herring	-	-	-	-	-	-	-	-	0.2	-	-	-
Soup	-	-	-	-	-	-	-	-	-	0.2	0.2	-
Total	2901.9	11.8	2753.1	137.0	5236.7	3924.9	1212.6	99.2	95.9	5460.0	256.0	5204.0

Table 3: Development of c.p.u.e. (catches per hour in tons) of roundnose grenadier (RNG) and Greenland halibut (GHL) 1981, 1982, 1983 and 1984 for "Zubringer Trawler" (900-999.9 BRT)

	September		October		November		December	
	RNG	GHL	RNG	GHL	RNG	GHL	RNG	GHL
Div. 2 G								
1981	-	-	0.31	0.35	-	-	-	-
1982	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-
1984	-	-	-	-	0.05	0.09	-	-
Div. 2 H								
1981	0.35	0.18	0.11	0.23	0.38	0.56	0.16	0.91
1982	-	-	0.29	0.32	0.12	0.51	0.10	0.69
1983	-	-	0.43	0.15	0.21	0.22	0.11	0.61
1984	-	-	0.17	0.31	0.08	0.47	0.03	0.72
Div. 2 J								
1981	-	0.08	0.17	0.19	0.61	0.14	0.33	0.21
1982	-	-	0.09	0.16	0.21	0.09	-	-
1983	-	-	-	-	-	-	-	-
1984	-	-	0.03	0.02	-	0.01	-	0.03
Div. 3 K								
1981	-	-	0.24	0.25	0.49	0.12	-	-
1982	0.39	0.09	-	-	-	-	0.10	0.09
1983	0.45	0.18	0.29	0.25	-	-	-	-
1984	1.10	0.14	1.39	0.07	0.03	-	0.29	0.04

Table 4: Development of proportion (%) of Greenland halibut (GHL) and rn-Grenadier (RNG) in the directed fishery for rn-Grenadier according to Divisions, months and years

	September		October		November		December	
	RNG	GHL	RNG	GHL	RNG	GHL	RNG	GHL
Div. 2 G								
1981	-	-	48	49	-	-	-	-
1982	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-
1984	-	-	-	-	33	55	-	-
Div. 2 H								
1981	57	27	25	55	33	46	7	43
1982	-	-	48	51	15	68	10	68
1983	-	-	65	23	38	40	14	79
1984	-	-	31	57	4	81	4	89
Div. 2 J								
1981	19	25	39	41	62	12	28	15
1982	-	-	24	21	42	12	-	-
1983	-	-	-	-	-	-	-	-
1984	-	-	11	8	-	-	-	-
Div. 3 K								
1981	-	-	45	36	62	15	5	4
1982	53	12	-	-	79	14	65	9
1983	54	22	43	38	-	-	-	-
1984	73	10	88	4	-	-	64	9

Table 5: Spatial distribution of the c.p.u.e. (catch in kg per hour) of Greenland halibut in different periods (mesh-size > 130 mm). In brackets of number of trawlstations.

A Period October 25th-31st

Latitude degree	55	56						57					Average
minute / Depth (m)	50	00	10	20	30	40	50	00	10	20	30	40	c.p.u.e.
400		285 (1)				83 (1)				348 (1)			239 (1)
500	0 (1)		331 (5)	501 (19)	278 (1)				333 (1)		222 (1)	125 (1)	414 (30)
600			644 (1)	746 (4)	166 (2)	239 (3)			1000 (1)	588 (2)		281 (3)	340 (4)
700						182 (1)	422 (2)		333 (1)				559 (7)
800		562 (3)	556 (1)			490 (1)		750 (1)					618 (21)
900		622 (20)					345 (1)						681 (23)
1000	1268 (2)	599 (17)		1096 (3)			333 (1)						886 (6)
1100	1111 (1)	920 (3)		750 (1)						691 (1)			250 (1)
Average c.p.u.e.	912 (4)	603 (46)	408 (7)	601 (28)	222 (4)	245 (6)	431 (4)	750 (1)	555 (3)	554 (4)	222 (1)	279 (5)	543 (113)

B Period November 13th-19th

Latitude degree	55	56						57					Average
minute / Depth (m)	50	00	10	20	30	40	50	00	10	20	30	40	c.p.u.e.
400													
500			188 (3)	483 (9)									409 (12)
600			262 (2)	565 (6)									489 (8)
700				500 (1)		375 (1)							438 (2)
800	240 (1)	685 (3)		706 (3)									630 (7)
900	444 (1)	584 (22)		690 (5)									598 (28)
1000		619 (13)		710 (18)									653 (48)
1100				472 (4)									472 (4)
1200				770 (6)	1444 (1)								866 (7)
1300				509 (4)	669 (2)								562 (6)
1400					447 (2)								447 (2)
Average c.p.u.e.	342 (2)	609 (55)	217 (5)	627 (56)	735 (5)	375 (1)							600 (124)

Continued of table 5

C Period November 20th-26th

Latitude degree	55	56						57					Average
minute	50	00	10	20	30	40	50	00	10	20	30	40	c.p.u.e.
Depth (m)													
400													
500			232 (2)	404 (7)									366 (9)
600			214 (1)	542 (5)									488 (6)
700				473 (4)		845 (6)							696 (10)
800		700 (1)		1389 (1)		769 (10)	657 (5)						768 (17)
900		577 (4)		935 (5)		880 (16)	740 (20)						797 (45)
1000	727 (1)	681 (9)		591 (7)	434 (2)	684 (18)	799 (11)						686 (48)
1100				496 (5)		132 (2)	625 (2)						444 (9)
1200				719 (2)	336 (2)		900 (1)						602 (5)
1300				333 (1)	200 (1)								267 (2)
Average	727	652	226	592	348	758	744						679
c.p.u.e.	(1)	(14)	(3)	(37)	(5)	(52)	(39)						(151)

D Period November 27th-December 3rd

Latitude degree	55	56						57					Average c.p.u.e.
minute	50	00	10	20	30	40	50	00	10	20	30	40	
Depth (m)													
400													
500													
600				514 (1)				500 (1)					507 (2)
700						950 (2)	1030 (2)						990 (4)
800				667 (1)	750 (1)	818 (16)	708 (8)	1000 (2)	1212 (3)				833 (31)
900				1134 (3)		799 (34)	789 (15)	977 (4)					827 (56)
1000				1235 (23)	1355 (2)	872 (21)	749 (14)		800 (1)				944 (61)
1100				964 (6)	1200 (2)	816 (5)	707 (2)						912 (15)
1200				1346 (2)									1346 (2)
Average				1152	1164	827	767	915	1109				901
c.p.u.e.				(36)	(5)	(78)	(41)	(7)	(4)				(171)

Continued of Table 5

E Period December 4th-10th

Latitude degree	55	56						57				Average
minute	50	00	10	20	30	40	50	00	10	20	30	40	c.p.u.e.
Depth (m)													
400													
500													
600				858 (1)									858 (1)
700				1500 (1)		1002 (4)							1102 (5)
800			3000 (1)	1515 (3)	696 (1)	848 (13)	898 (3)	500 (1)					1021 (22)
900				1089 (9)		905 (46)	828 (5)						927 (60)
1000				1112 (29)		967 (34)	923 (4)						1027 (67)
1100				1168 (9)	1416 (2)	1103 (3)	1077 (1)						1182 (15)
1200				1111 (1)									1111 (1)
Average			3000	1143	1176	929	893	500					1006
c.p.u.e.			(1)	(53)	(3)	(100)	(13)	(1)					(171)

Table 6: Overview about the average of length and weights of redfish-samples conducted in Division 3 K (meshsize 130 mm)

Date	Depth range	Structure used for ageing	♂♂		♀♀		Total n ♂ + ♀
			$\emptyset L_t$ (cm)	$\bar{w}$ (g)	$\emptyset L_t$ (cm)	$\bar{w}$ (g)	
21.10.	380-590	otoliths	31.55	395	32.34	427	231
22.10.	380-430	scales	30.49	397	32.72	543	236
11.11.	290-330	-	30.27	-	32.28	-	268

Table 7: Average length per age and average weight per age of redfish in catches taken by commercial bottom trawl (mesh-size 130 mm) NAFO 3 K, Oct. 1984

Age	ageing by otoliths[1]				ageing by scales[2]			
	♂♂		♀♀		♂♂		♀♀	
	$\emptyset L_t$ (cm)	$\bar{w}$ (g)	$\emptyset L_t$ (cm)	$\bar{w}$ (g)	$\emptyset L_t$ (cm)	$\bar{w}$ (g)	$\emptyset L_t$ (cm)	$\bar{w}$ (g)
6	26.68	250	24.93	195				
7	27.18	238	25.91	252	26.73	237	22.50	145
8	26.62	232	27.91	263	27.35	255	27.44	262
9	29.98	312	29.58	311	28.71	309	29.22	328
10	31.23	403	31.09	369	29.49	328	30.69	382
11	32.94	429	31.94	386	32.00	415	31.94	428
12	34.80	516	33.06	448	33.07	485	33.55	502
13	35.50	554	36.74	580	34.97	570	34.92	580
14	38.00	620	38.08	700	35.13	537	37.83	608
15			38.89	762	36.00	638	39.50	898
16	39.50	665	40.15	798	39.50	780	39.93	975
17			40.18	870			40.90	960
18							39.50	825
19							40.85	957
20							42.50	995
21			43.50					
22								
23			44.50					

[1] dated 21.10.84
[2] dated 22.10.84

Table 8: Size composition (L_a cm)[1] of rn-grenadier (numbers) in catches taken by commercial bottom trawls (mesh-size > 130 mm) in Division 2H, October to December 1984

	Date							
1	25.10.		19.11.		23.11.		3.12.	
L_a (cm)	♂	♀	♂	♀	♂	♀	♂	♀
7.0								
7.5							1	
8.0	1							
8.5		1						
9.0							1	3
9.5	3				2		4	
10.0	3				5	2		3
10.5	9	3			6	1	5	5
11.0	5		1		4	4	10	3
11.5	5	4	1		8	3	10	12
12.0	4	4	1		17	6	11	8
12.5	3	6	4	2	21	7	7	17
13.0	9	10	6	4	14	9	8	12
13.5	7	6	8	2	17	6	6	8
14.0	5	7	10	9	24	4	8	6
14.5	13	2	11	8	19	8	2	4
15.0	8	5	10	12	18	13	3	7
15.5	3	2	9	16	10	2	2	5
16.0	4	6	17	13	10	9	1	4
16.5	4	3	5	7	3	8		2
17.0			2	6	3	2		2
17.5			3	4	1	2		
18.0	1		3	4		1		1
18.5		1		5		2		1
19.0				3		1		
19.5				1				
20.0				1				
Total	87	60	91	97	182	90	79	103

[1] analfin-length

Table 9: Size composition (analfin length, cm) of rn-grenadier (numbers) in catches taken by commercial bottom trawls of different mesh sizes in Division 3 K, October 1984

L_a (cm)[1]	Mesh-size 60-80 m			Mesh-size 130 mm	
	♂	♀	unsexed	♂	♀
5,0			1		
5,5					
6,0			3		
6,5			8		
7,0			1		
7,5	4	1	2		
8,0	7	7			
8,5	11	7			
9,0	17	8		1	
9,5	20	15		1	
10,0	43	23		1	1
10,5	45	30		2	1
11,0	55	40		3	5
11,5	52	45		2	7
12,0	53	42		4	3
12,5	32	44		5	2
13,0	34	37		4	4
13,5	25	35		5	3
14,0	19	27		4	9
14,5	19	17		5	5
15,0	11	11		5	7
15,5	10	17		2	2
16,0	8	11		2	7
16,5		5		1	3
17,0		3		1	4
17,5		5		1	
18,0					1
18,5		1		1	1
19,0		1			
19,5					
20,0					
Total	465	432	15	50	66

Table 10: General view of length- and weight composition of rn-grenadier in catches taken by commercial bottom trawls (all mesh-sizes) in division 3 K, October 1984

		Males	Females
Length (cm)	Range of analfin length	7.5-18.5	7.5-20.5
	Main analfin length	10.0-13.5	10.5-14.0
	Average analfin length	12.04	12.83
	Average total length	53.7	55.7
Weight (g)	Range of total weight	30-1170	45-1495
	Average total weight	472.6	529.2
Numbers		513	498

Table 11: Size composition of Greenland halibut (numbers) in catches taken by commercial bottom trawls (mesh-size ≥ 130 mm) in division 2H, October to December 1984

L_t	Period									
	25.-31.10.		13.-20.11.		21.-26.11.		27.11.-3.12.		4.-10.12.	
(cm)	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀
36	3						1			
38					1	1		1	1	
40			1	2	1					1
42	3		3	3	3	1	1	1	1	
44	6	2	3	3	3	3	1	3	1	
46	8	6	14	4	11	7	14	5	6	3
48	21	7	12	4	13	8	21	8	13	3
50	25	16	24	18	24	10	31	18	22	3
52	27	17	26	10	35	17	32	10	31	13
54	24	13	30	16	31	9	46	25	30	20
56	27	15	23	11	28	12	47	24	19	11
58	26	12	28	12	16	14	41	28	11	5
60	11	8	21	10	21	6	24	11	18	7
62	7	10	25	9	6	9	14	15	9	6
64	1	3	6	6	8	3	14	13	7	11
66	3	9	5	9	7	10	15	6	7	4
68	3	6	3	8	5	6	17	7	3	12
70	1	7	2	6	6	8	12	8	4	6
72		2		7		4	2	11	1	6
74	2	2	1	11		7	1	8		7
76		4		15		4	3	13	1	3
78		1		11		7		15		12
80		3		10		9	1	18		4
82		6		14		5		22		6
84		6		11		2		8		5
86		3		11		7		14		5
88		5		12		3		7		7
90	1	1		6		5		4		2
92		1		7		4		14		6
94		2		1		3		5		2
96		1		3		4		2		3
98		2		3		3		3		
100		1		3		1		4		
102		1				1		3		
104								1		
Total	199	172	227	256	219	193	338	335	185	173

Table 12: Length distribution (fork length) and mean weight per length of Atlantic mackerel, NAFO 6B, Jan/Feb. 1984

Length group (cm)	length L_f (o/oo)	mean weight (g)
22	4	105.0
23	-	-
24	13	113.3
25	18	141.3
26	18	162.5
27	61	182.5
28	66	211.7
29	53	233.8
30	140	252.7
31	171	285.4
32	127	326.0
33	92	394.0
34	18	405.0
35	4	395.0
36	9	457.5
37	4	500.0
38	18	535.0
39	31	638.0
40	96	693.4
41	48	737.3
42	9	772.5

Table 13: Age composition of Atlantic mackerel, NAFO 6B, Jan/Feb 1984

Age	1	2	3	4	5	6	7	8	9	10	11	12
o/oo	4	194	516	59	39	45	34	26	44	27	4	8