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Spanish Research Report for 1993

by

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Subarea 3

Status of the Fisheries

The Spanish fleet currently fishing in NAFO Convention area contains three components: pair-trawlers, fishing traditionally for cod, small freezers, fishing for flatfish, and large freezers, fishing for Greenland halibut. During 1993 pair-trawlers fished mainly for cod and partially for Greenland halibut, and all freezers fished for Greenland halibut in deep water zones of Divisions 3LMN.

Pair-trawl fishery for cod

There were 10 pair-trawlers fishing in NAFO area during 1993. The fleet left the area in June when the cod quotas were already caught. Three observers were on board pair-trawlers. Sampling intensity of cod catch was:

Division:	3M	3N
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Samples	57	83
Fish measured	15580	25506
Otoliths aged	623	1153
Catch (t)	2241	3763
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Cod length and age frequency in those months with sampling are presented in Tables 1 and 2. In these tables SAMPLED WEIGHT means the weight of all samples taken from the catch to make length measurements; frequencies are referred to the sample size. Samples were not weighed on board; their weights were calculated with a length-weight relationship. SAMPLES means the number of samples taken, and MEAN WEIGHT is the quotient between Sampled Weight and Total (frequency).

Mean weights at age in the catch were also calculated with the same length-weight relationship. Results are presented in Table 3. In Table 2 SOP means Sum Of Products and it is a later calculation of sampled catch using age frequencies and weight at age data (Table 3).

As in previous reports, length and age frequencies presented in this report came from the bulk of the catch, including discards.

Redfish and American plaice caught as by-catch were sampled, and length frequencies are presented in tables 4 and 5, respectively. Catches of Greenland halibut of pair-trawlers fishing in deep waters for this species were also sampled, and length frequencies are presented in table 6.

Freezers fishery for Greenland halibut

During 1993 there were 12 small freezers mainly fishing for Greenland halibut in deep water zones of Divisions 3LMN. Each vessel had one observer on board to sample catch during an average time period of four months. Length frequencies of American plaice and Greenland halibut are presented in tables 7 and 8.

There were 22 large freezers fishing for Greenland halibut in the same deep zones. Observers on board covered one third of all the year activity of these vessels. Length frequencies of Greenland halibut are presented in table 9.

Special Research Studies

During 1993 we co-operated in the EU survey of Flemish Cap, carried out in July. The survey had a bottom trawl stratified random design and 101 valid tows were made up to a depth of 720 meters (400 fathoms). Results of the survey are presented in the report (SCR Doc. 94/) and it includes age compositions for cod, American plaice, redfish (the three species of Sebastes sp) and Greenland halibut stocks.

Table 1 - Length composition of pair-trawler cod catches.

Division Month	3M				3N		
	APR	MAY	JUN	JUL	MAY	JUN	JUL
<u>length</u>							
21-23:	.	.	6	1	.	.	.
24-26:	.	2	81	68	3	5	2
27-29:	.	4	257	426	52	32	22
30-32:	.	38	346	916	450	336	170
33-35:	3	125	218	721	778	1016	509
36-38:	23	333	316	334	899	1580	758
39-41:	69	737	776	596	1201	2152	862
42-44:	84	911	1009	840	1165	2623	931
45-47:	45	904	725	712	757	2125	723
48-50:	22	529	409	434	400	1425	498
51-53:	9	391	247	160	273	722	262
54-56:	1	252	159	75	246	535	189
57-59:	.	214	141	53	147	336	117
60-62:	2	142	115	59	130	213	80
63-65:	.	144	125	49	79	166	41
66-68:	.	73	64	52	49	98	27
69-71:	1	39	64	31	37	62	23
72-74:	.	17	48	30	23	45	8
75-77:	.	21	40	28	14	39	3
78-80:	.	15	42	22	8	25	6
81-83:	.	8	45	10	2	11	4
84-86:	.	2	21	12	1	6	.
87-89:	.	2	13	3	.	3	2
90-92:	.	1	11	1	.	2	.
93-95:	.	2	5	2	.	.	.
96-98:	.	3	1	1	.	.	.
99-01:	.	1	.	.	.	.	.
102-04:	.	.	.	.	.	.	.
105-07:	.	.	.	.	.	2	.
108-10:	.	.	.	.	.	.	.
111-13:	.	.	2	.	.	.	.
114-16:	.	.	3	1	.	.	.
117-19:	.	.	.	.	.	.	.
120-22:	.	.	.	.	.	1	.
123-25:	.	.	1	.	.	.	.
126-28:	.	.	.	.	.	.	.
129-31:	.	.	.	.	.	.	.
132-34:	.	.	.	.	.	.	.
135-37:	.	.	.	.	.	.	.
138-40:	.	.	.	.	.	1	.
Total	258	4907	5290	5637	6714	13556	5236
Samples	1	18	18	20	20	43	20
Fish meas.	258	4907	5290	5637	6714	13556	5236
Sampled							
weight: Kg	189	5152	5728	4352	5553	12135	4360
Mean weight	0.733	1.050	1.083	0.772	0.827	0.895	0.833

Table 2 - Age composition of pair-trawler cod catches.

Division Month	3M				3N		
	APR	MAY	JUN	JUL	MAY	JUN	JUL
<u>age</u>							
1	.	.	.	.	.	.	.
2	1	101	761	1953	20	13	6
3	145	1829	1923	1914	1770	1587	1449
4	109	2177	1791	1343	3771	4819	3108
5	3	643	481	199	544	919	309
6	.	60	68	45	373	563	276
7	.	77	163	93	202	287	65
8	.	18	91	50	27	41	19
9	.	2	6	4	2	4	.
10	.	.	2	.	2	6	.
11	.	.	.	1	.	3	.
12	.	.	.	.	.	.	.
Total	258	4906	5290	5637	6714	13547	5233
n. of samples	1	18	18	20	20	43	20
Sampled							
catch Kg	189	5152	5728	4352	5553	12135	4360
SOP	221	5011	5666	4234	5554	12084	4344

Table 3 - Mean weight (gr) at age of pair-trawler cod catches.

Division Month	3M				3N		
	APR	MAY	JUN	JUL	MAY	JUN	JUL
<u>age</u>							
1	.	.	.	.	.	.	.
2	315	315	252	287	259	261	206
3	675	675	644	633	387	400	439
4	1068	1068	995	1013	735	771	821
5	2102	2102	2108	2000	1329	1312	1553
6	3031	3031	3051	2322	1880	1854	1941
7	3896	3896	3981	3323	2734	2799	3042
8	5333	5333	5665	5014	3639	3816	2736
9	7766	7766	7642	6576	3880	4325	.
10	.	.	13460	.	5207	5509	.
11	.	.	.	14576	5258	8841	.
12	.	.	.	.	.	.	.

Table 4 - Redfish caught by pair-trawler,

Division Month	3M									3N					
	APR			JUN			JUL			JUN			JUL		
Sex	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F
<u>length</u>															
15:	15	.	.	.	.	.
16:	17	.	.	.	.	.
17:	.	2	1	.	.	.	.	.	.	29	.	.	.	.	.
18:	.	.	2	.	.	.	.	.	.	60	.	.	.	7	.
19:	.	1	1	.	.	.	.	.	.	74	.	.	.	11	.
20:	.	.	4	.	.	.	.	.	.	137	.	.	.	29	.
21:	.	1	2	.	.	.	.	.	3	178	.	.	.	50	.
22:	.	3	4	.	.	.	.	.	1	208	.	.	.	61	.
23:	.	4	3	.	.	.	.	1	1	143	.	.	.	43	.
24:	.	3	6	.	.	1	.	1	6	98	.	.	.	33	.
25:	.	7	18	.	.	.	.	1	4	73	.	.	.	46	.
26:	.	13	18	.	1	2	.	1	4	65	.	.	.	41	.
27:	.	19	18	.	2	2	.	4	3	33	.	.	.	27	.
28:	.	18	28	.	1	5	.	6	6	18	.	.	.	30	.
29:	.	23	41	.	1	.	.	10	10	17	.	.	.	21	.
30:	.	37	48	.	1	2	.	10	14	22	.	.	.	29	.
31:	.	35	43	.	1	6	.	15	20	13	.	.	.	19	.
32:	.	47	50	.	4	6	.	19	16	12	.	.	.	23	.
33:	.	31	37	.	6	6	.	12	16	8	.	.	.	13	.
34:	.	25	36	.	12	9	.	10	14	5	.	.	.	9	.
35:	.	30	28	.	11	10	.	10	13	7	.	.	.	5	.
36:	.	25	25	.	11	18	.	13	11	6	.	.	.	.	.
37:	.	21	24	.	14	22	.	11	12	.	.	.	.	.	.
38:	.	14	21	.	25	35	.	20	12	.	.	.	.	.	.
39:	.	5	5	.	31	43	.	12	19	.	.	.	.	.	.
40:	.	6	9	.	27	37	.	5	10	1	.	.	.	.	.
41:	.	2	2	.	36	51	.	6	8	.	.	.	.	.	.
42:	.	2	4	.	22	32	.	4	9	.	.	.	.	.	.
43:	.	2	1	.	34	40	.	1	7	.	.	.	.	.	.
44:	.	1	.	.	19	18	.	3	6	.	.	.	.	.	.
45:	12	15	.	.	3	.	.	.	.	.	.
46:	3	6	.	1	4	.	.	.	.	.	.
47:	5	6	.	.	2	.	.	.	.	.	.
48:	3	2	.	1	.	.	.	.	.	.	.
49:	1	2	.	.	1	.	.	.	.	.	.
50:
51:
52:	1	.	.	.	.	.	.
53:	2	.	.	.	.	.	.
Total		377	479		283	376		177	238	1239				497	
Sampled weight															
by sex Kg	0	181	222	0	252	330	0	106	154	222	0	0	124	0	0
Sampleless			3			3			2			5			2
Fish meas.			856			659			415			1239			497
Sampled															
weight Kg			403			582			260			222			124
Mean weight		0.4810	.464		0.8910	.877		0.5990	.646	0.179			0.250		

Table 5 - American plaice caught by pair-trawler.

Division Month Sex	3M			JUL			MAY			3N			JUN			JUL		
	JUN		F	JUL		F	MAY		F	JUN		F	JUN		F	JUL		F
	I	M		I	M		I	M		I	M		I	M		I	M	
length																		
20-21:
22-23:
24-25:
26-27:
28-29:	.	.	3	1
30-31:	2	4	.	13	.	.	2	.	.	3	1	1	1	1	1	1	1	
32-33:	3	10	.	35	6	.	14	.	.	5	5	5	1	1	8	15	1	
34-35:	5	12	.	44	16	.	27	.	.	11	6	9	16	30	16	30	9	
36-37:	2	8	.	114	24	.	31	.	.	18	21	25	37	50	37	50	22	
38-39:	8	6	.	175	53	.	40	.	.	25	32	26	33	47	33	47	52	
40-41:	3	9	.	124	69	.	43	.	.	37	59	53	21	48	21	48	120	
42-43:	3	26	.	64	89	.	14	.	.	35	44	70	34	56	34	56	149	
44-45:	9	36	.	19	108	.	14	.	.	26	27	43	29	38	29	38	121	
46-47:	16	44	.	9	149	.	6	.	.	25	18	18	27	20	27	20	90	
48-49:	12	52	.	6	151	.	5	.	.	11	8	21	14	8	14	8	87	
50-51:	3	28	.	.	84	.	7	.	.	12	5	12	5	7	5	7	76	
52-53:	2	11	.	.	55	.	5	.	.	5	7	7	15	6	15	6	43	
54-55:	.	8	.	.	22	.	4	.	.	6	4	6	5	5	5	5	36	
56-57:	.	2	.	.	10	.	3	.	.	12	1	5	2	2	2	9	26	
58-59:	.	3	.	.	6	.	2	.	.	4	2	1	1	1	1	1	30	
60-61:	.	.	.	.	4	.	2	.	.	3	.	4	.	.	.	.	22
62-63:	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	5
64-65:	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
66-67:	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Total	58	262		603	847		219			239	242	307	246	346	917			
Sampled weight by sex Kg	0	62	275	0	367	916	142	0	0	207	170	241	178	230	944			
Samples Fish meas.			1		6			1				3			7			
Sampled weight Kg		330		1450			219				788			1509				
Maen weight	0.9051.048			0.6091.082		1284	.647	142		.866	.702	.785	.724	.664	1.030			

Table 6 - Greenland halibut caught by pair-trawler,

Division Month	-----3M-----								
	APR			MAY			JUL		
Sex	I	M	F	I	M	F	I	M	F
<u>length</u>									
24-25:	.	1	1	.	.	.	.	.	.
26-27:	.	2	3	.	.	.	.	.	.
28-29:	.	4	6	.	.	.	.	.	.
30-31:	.	8	8	.	.	1	.	.	.
32-33:	.	14	16	.	.	.	.	.	.
34-35:	.	18	25	.	1	3	.	.	1
36-37:	.	27	43	.	3	5	.	1	4
38-39:	.	52	52	.	7	5	.	5	6
40-41:	.	39	78	.	8	18	.	5	10
42-43:	.	79	127	.	12	41	.	8	12
44-45:	.	110	183	.	22	44	.	7	19
46-47:	.	146	218	.	32	51	.	11	9
48-49:	.	124	199	.	28	60	.	11	20
50-51:	.	95	177	.	33	55	.	11	27
52-53:	.	70	98	.	32	58	.	9	23
54-55:	.	51	72	.	14	53	.	8	15
56-57:	.	27	41	.	12	39	.	4	11
58-59:	.	18	33	.	3	22	.	3	8
60-61:	.	7	22	.	.	8	.	2	5
62-63:	.	5	17	.	2	4	.	3	5
64-65:	.	.	8	.	.	3	.	.	4
66-67:	.	2	6	.	.	5	.	.	2
68-69:	.	.	2	.	.	.	.	.	2
70-71:	.	.	4	.	.	2	.	.	1
72-73:	.	.	3	.	.	.	.	.	2
74-75:	.	.	1	.	.	1	.	.	2
76-77:	1
78-79:	.	.	1	.	.	.	.	.	1
80-81:	.	.	1	.	.	.	.	.	1
82-83:	1
84-85:
86-87:	1
88-89:
90-91:
92-93:
94-95:
Total	899	1445		209	478		88	193	
Sampled weight									
by sex Kg	0	812	1386	0	211	532	0	92	250
Samples			8			3			1
Fish meas.			2344			687			
weight Kg			2198			744			342
Maen weight	.903	.959		1.010	1.114		1.044	1.297	

Sampled

Table 7. Length composition of American plaice caught by small freezers.

Division Month Length	3L						3M						TOTAL	
	JAN	FEB	MAR	APRIL	MAY	JUN	JAN	FEB	MAR	APRIL	MAY	JUN		JUL
16-17	0	8	0	0	0	0	0	12	4	0	0	0	13	29
18-19	0	51	0	9	0	0	0	46	27	0	25	0	16	114
20-21	0	145	54	24	6	0	0	75	2	15	25	0	120	237
22-23	0	379	142	176	84	0	0	54	22	8	19	0	163	266
24-25	0	610	366	326	227	0	0	133	19	0	25	0	102	279
26-27	0	1223	713	947	509	0	0	96	54	3	27	0	194	374
28-29	0	1786	1266	1241	977	1	0	62	20	1	20	0	268	371
30-31	0	2236	1778	1837	1385	2	0	12	1	3	24	0	285	325
32-33	0	2486	2088	2015	1727	2	0	26	2	12	10	0	411	461
34-35	6	2224	2130	2304	1768	6	0	14	0	12	0	0	586	612
36-37	3	1969	1634	1836	1479	8	0	10	4	14	5	0	443	476
38-39	30	1260	1436	1359	962	16	0	10	0	13	0	0	541	564
40-41	82	1015	1207	1045	949	40	0	10	0	17	0	0	508	535
42-43	65	904	993	910	918	43	0	3	0	24	5	0	386	418
44-45	88	542	588	350	704	69	0	2	0	14	0	0	360	376
46-47	44	364	470	255	470	37	0	1	0	6	0	0	354	361
48-49	30	287	413	158	329	12	0	1	0	4	0	0	201	206
50-51	9	157	161	155	180	10	0	0	0	0	0	0	62	62
52-53	6	124	149	80	57	4	0	0	0	0	0	0	27	27
54-55	0	51	36	61	59	1	0	0	0	2	0	0	10	12
56-57	3	18	71	55	30	0	0	0	0	0	0	0	1	1
58-59	0	7	36	37	31	0	0	0	155	148	185	0	5051	6106
60-61	0	18	16	40	9	0	0	0	33	106	47	0	3579	3908
62-63	0	6	10	5	18	0	0	64	0	127	0	0	1628	1819
64-65	0	0	0	0	9	0	0	2	0	3	0	0	10	15
Total	366	17870	15757	15225	12887	251	0	567	155	148	185	0	5051	6106
Catch(t)	294	7286	7374	6597	6268	200	0	143	33	106	47	0	3579	3908
measur.	129	3072	2842	2075	3034	558	0	64	0	127	0	0	1628	1819
Samples	1	20	19	11	20	5	0	2	0	3	0	0	10	15

Table 7. (continued)

Division	3N							
Month								
Length	JAN	FEB	MAR	APRIL	MAY	JUN	JUL	TOTAL
16-17	0	0	0	0	27	167	210	404
18-19	0	0	0	14	163	434	626	1237
20-21	0	0	4	234	307	743	651	1939
22-23	0	0	10	435	263	572	800	2080
24-25	0	0	44	395	309	704	1263	2715
26-27	0	0	152	963	788	1250	1218	4371
28-29	0	0	302	1444	1032	1386	1112	5276
30-31	0	0	650	1800	1441	1776	1272	6939
32-33	0	0	1027	1911	1400	2051	1217	7606
34-35	0	0	1004	1968	1773	1937	814	7496
36-37	0	0	894	1565	1477	1476	794	6206
38-39	0	0	629	1127	1089	881	569	4295
40-41	0	0	405	750	481	496	422	2554
42-43	0	0	321	541	323	309	426	1920
44-45	0	0	229	384	215	230	55	1113
46-47	0	0	217	322	192	181	0	912
48-49	0	0	94	171	199	204	3	671
50-51	0	0	108	160	122	76	44	510
52-53	0	0	54	129	138	51	0	372
54-55	0	0	45	83	28	21	0	177
56-57	0	0	45	64	18	9	44	180
58-59	0	0	41	37	63	36	44	221
60-61	0	0	13	21	36	16	0	86
62-63	0	0	11	14	13	0	0	38
64-65	0	0	10	6	9	0	0	25
66-67	0	0	0	1	0	0	0	1
68-69	0	0	0	3	9	0	0	12
Total	0	0	6309	14542	11915	15006	11584	59356
Catch (t)	0	0	3190	6077	4923	5013	3179	22381
measur	0	0	1967	4792	1583	1647	206	10195
Samples	0	0	9	25	9	9	1	53

Table 8. Length composition of Greenland halibut caught by small freezers.

Division Month Length	3L												TOT
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
18-19				0									0
20-21	0	8	0	0	0	0	0	0	0	0	0	0	8
22-23	0	19	13	0	1	1	1	1	1	1	0	1	39
24-25	0	0	2	11	0	0	0	0	11	0	0	0	24
26-27	10	108	10	24	15	0	0	4	10	0	0	0	181
28-29	38	369	65	141	129	34	0	9	86	0	0	0	871
30-31	15	466	148	387	461	46	0	32	127	0	0	16	1698
32-33	63	547	172	679	792	114	9	72	234	0	0	16	2698
34-35	213	1752	649	895	2395	393	37	220	446	8	0	69	7077
36-37	856	3813	1633	2140	4486	822	94	427	602	4	0	84	14961
38-39	1536	5740	2885	3266	6014	802	172	687	819	18	0	114	22053
40-41	2256	6584	4037	4082	6932	1103	232	952	1128	83	0	92	27481
42-43	2630	6597	4318	4707	7125	1474	377	1102	1487	109	0	122	30048
44-45	2581	5372	4194	5328	7409	1589	419	1166	1268	126	0	106	29558
46-47	2659	5236	4419	5289	6552	1544	469	1227	1492	193	0	53	29133
48-49	1902	3769	3779	4766	5902	1389	556	1202	1511	244	0	38	25058
50-51	1455	2557	3055	3797	4917	1260	538	929	1227	238	0	16	19989
52-53	1045	1701	2112	2907	3956	876	388	862	1058	240	0	8	15153
54-55	686	1272	1637	2028	2757	680	322	921	869	234	0	23	11429
56-57	596	963	1245	1402	1956	628	330	547	658	221	0	8	8554
58-59	402	749	977	878	1339	374	294	421	467	166	0	8	6075
60-61	299	468	647	454	838	377	243	346	336	106	0	8	4122
62-63	247	304	394	224	534	197	219	305	238	67	0	0	2729
64-65	123	196	389	85	389	138	141	143	193	38	0	0	1835
66-67	97	188	208	70	184	88	102	132	123	55	0	0	1247
68-69	69	106	162	34	174	60	77	118	73	19	0	8	900
70-71	55	97	172	14	154	67	82	64	71	13	0	0	789
72-73	106	118	105	10	177	49	82	55	42	33	0	0	777
74-75	50	85	98	2	76	28	40	41	34	15	0	0	469
76-77	38	61	58	0	33	56	32	32	20	15	0	0	345
78-79	52	70	41	0	34	49	34	30	53	16	0	0	379
80-81	9	72	46	0	32	51	30	18	23	7	0	0	288
82-83	28	44	52	0	39	5	24	0	13	3	0	0	208
84-85	9	18	27	0	26	26	32	3	11	15	0	0	167
86-87	9	47	38	0	29	6	22	8	11	3	0	0	173
88-89	9	20	21	0	6	31	9	4	0	0	0	0	100
90-91	16	17	26	0	3	13	4	0	0	0	0	0	79
92-93	0	3	53	0	21	16	7	5	4	0	0	0	109
94-95	0	0	3	0	20	7	0	5	3	0	0	0	38
96-97	5	0	9	0	0	0	0	0	0	0	0	0	14
98-99	9	0	26	0	0	11	0	0	0	0	0	0	46
100-101	37	0	5	0	0	0	0	0	0	0	0	0	42
102-103	11	0	21	0	0	0	0	0	0	0	0	0	32
104-105	0	3	0	0	0	0	0	0	0	0	0	0	3
106-107	0	0	0	0	0	0	0	0	0	0	0	0	0
108-109	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	20221	49539	37951	43620	65907	14404	5418	12090	14749	2290	0	790	266979
Catch(t)	17484	36069	1690	33723	51806	13480	6841	11815	13521	2897	0	0	479
Measur.	4135	12653	12911	12781	17244	4609	3264	2597	4871	1133	0	217	77415
Samples	26	73	71	69	96	29	23	31	34	9	0	0	462

Table 8. (continued)

Division	3M												
Month													
Length	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
24-25	0	0	0	0	0	0	0	0	0	0	0	0	0
26-27	0	17	0	0	0	0	0	0	0	0	0	0	17
28-29	0	36	0	0	0	0	0	0	0	0	0	0	36
30-31	34	64	13	18	0	5	0	0	0	0	0	0	134
32-33	6	99	46	34	0	9	0	0	0	0	0	0	194
34-35	73	225	75	59	44	20	3	0	0	0	0	0	499
36-37	128	364	300	186	80	59	1	0	20	0	0	0	1138
38-39	267	843	666	457	154	118	8	0	40	0	0	0	2553
40-41	607	1381	1146	901	256	181	10	0	46	0	0	0	4528
42-43	918	1739	1731	1435	397	207	20	0	91	0	0	0	6538
44-45	1117	2348	1983	1688	466	345	44	0	105	0	0	0	8096
46-47	1077	2123	2190	2511	558	314	50	0	85	0	0	0	8908
48-49	1207	2090	2403	2753	900	468	62	0	85	0	0	0	9968
50-51	994	1695	2400	2631	712	463	76	0	59	0	0	0	9030
52-53	813	1114	1982	2402	452	346	57	0	59	0	0	0	7225
54-55	593	1044	1617	1986	394	268	71	0	33	0	0	0	6006
56-57	332	581	1141	1409	326	226	67	0	27	0	0	0	4109
58-59	122	545	953	971	177	160	70	0	26	0	0	0	3024
60-61	56	400	597	614	188	169	58	0	13	0	0	0	2095
62-63	81	189	445	483	96	125	37	0	20	0	0	0	1476
64-65	28	124	257	266	66	65	32	0	13	0	0	0	851
66-67	5	109	226	261	17	42	32	0	0	0	0	0	692
68-69	32	126	177	176	50	44	29	0	7	0	0	0	641
70-71	9	92	93	102	10	48	29	0	0	0	0	0	383
72-73	31	57	113	78	8	19	15	0	0	0	0	0	321
74-75	8	72	104	38	19	33	5	0	0	0	0	0	279
76-77	10	41	42	27	18	28	27	0	0	0	0	0	193
78-79	17	44	44	33	17	25	19	0	0	0	0	0	199
80-81	0	30	43	48	6	9	8	0	0	0	0	0	144
82-83	5	40	32	18	5	10	10	0	0	0	0	0	120
84-85	0	37	38	11	4	26	4	0	0	0	0	0	120
86-87	0	24	21	14	8	9	7	0	0	0	0	0	83
88-89	0	30	18	15	8	9	0	0	0	0	0	0	80
90-91	0	2	0	4	0	21	10	0	0	0	0	0	37
92-93	0	0	0	5	0	0	4	0	0	0	0	0	9
94-95	0	8	10	4	0	16	0	0	0	0	0	0	38
96-97	0	0	0	10	0	5	0	0	0	0	0	0	15
98-99	0	0	11	0	0	0	0	0	0	0	0	0	11
100-101	0	0	0	5	0	0	0	0	0	0	0	0	5
Total	8570	17733	20917	21653	5436	3892	865	0	729	0	0	0	79795
Catch(t)	7573	16813	931	23263	5597	4818	1472	0	656	0	0	0	61123
measur.	1447	5487	8521	7619	1607	1230	731	0	200	0	0	0	26842
Samples	13	35	49	43	12	7	4	0	1	0	0	0	164

Table 8. (continued)

Division	3N												TOT
Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Length													
18-19	0	0	0	3	0	0	0	5	0	0	0	0	8
20-21	0	0	40	2	0	8	45	79	11	0	0	0	185
22-23	0	0	7	8	0	61	233	94	15	9	0	0	427
24-25	0	0	0	68	0	64	360	178	22	23	12	3	730
26-27	0	0	8	85	0	157	437	210	5	22	7	0	931
28-29	0	0	19	209	0	289	1099	321	53	18	25	39	2072
30-31	0	0	31	226	33	604	2241	510	115	92	21	39	3912
32-33	0	0	16	312	43	631	3001	1069	351	135	97	42	5697
34-35	0	0	48	351	79	495	3654	1655	545	209	336	129	7501
36-37	0	0	59	826	194	577	3571	1792	552	474	312	173	8530
38-39	0	0	161	1210	386	558	4088	2129	624	697	475	143	10471
40-41	0	0	245	1848	643	1005	4533	2279	1036	1029	700	400	13718
42-43	0	0	384	2719	1007	973	4079	2459	1034	1280	1108	555	15598
44-45	0	0	426	3037	2210	1282	4526	2354	1291	1573	1279	670	18648
46-47	0	0	453	3599	1772	1552	3928	2109	1216	1677	1554	782	18642
48-49	0	0	646	4160	2282	1627	3950	1813	1307	1663	1771	973	20192
50-51	0	0	494	3482	2324	1801	3815	1916	1171	1542	1647	1025	19217
52-53	0	0	508	3182	2266	1876	3550	1604	1138	1542	1619	1188	18473
54-55	0	0	468	2377	1614	1843	3055	1432	1397	1408	1563	976	16133
56-57	0	0	314	1528	1215	1302	1812	1259	892	1241	1413	834	11810
58-59	0	0	271	1087	628	1027	1144	1035	632	855	1043	518	8240
60-61	0	0	201	703	360	623	696	565	517	784	952	554	5955
62-63	0	0	141	408	217	415	459	355	319	507	694	347	3862
64-65	0	0	157	349	127	325	303	283	219	451	687	322	3223
66-67	0	0	74	228	112	282	165	145	140	351	557	284	2338
68-69	0	0	132	196	89	226	131	203	134	211	439	247	2008
70-71	0	0	96	172	73	226	194	106	87	163	255	63	1435
72-73	0	0	57	77	46	121	79	58	51	98	198	102	887
74-75	0	0	74	61	29	157	59	40	62	90	204	66	842
76-77	0	0	65	56	42	171	38	54	6	78	116	39	665
78-79	0	0	32	33	33	73	26	50	13	39	90	3	392
80-81	0	0	11	10	7	83	17	30	9	27	79	5	278
82-83	0	0	36	0	2	38	39	10	21	6	2	19	173
84-85	0	0	14	20	2	68	10	14	1	19	18	0	166
86-87	0	0	2	3	21	33	11	0	0	3	4	0	77
88-89	0	0	17	7	11	14	8	17	8	6	8	0	96
90-91	0	0	20	5	0	27	3	0	0	0	6	0	61
92-93	0	0	8	0	0	10	4	0	0	3	2	0	27
94-95	0	0	5	0	6	6	0	0	0	0	0	0	17
96-97	0	0	0	0	0	3	0	0	0	0	2	0	5
98-99	0	0	0	0	0	0	0	0	0	0	0	0	0
100-101	0	0	0	0	0	0	0	0	0	0	0	0	0
102-103	0	0	0	0	6	0	0	0	0	0	0	0	6
Total	0	0	5740	32647	17879	20633	55363	28232	14994	18325	19295	10540	223648
Catch(t)	0	0	256	3850	18229	22470	40569	23033	14602	19953	23921	12573	179456
measur.	0	0	2120	9827	5156	6759	14391	7242	4897	7284	7207	2707	67590
Samples	0	0	13	53	30	44	87	53	34	50	50	16	430

Table 9. Length composition of Greenland halibut caught by large freezers.

Length	Division 3L											Total
	Jan	Feb	Mar	Apr	May	Jun	Aug	Sep	Oct	Nov	Dec	
22-23	0	0	0	12	0	0	0	0	0	0	0	12
24-25	64	34	42	0	39	0	7	0	0	0	55	241
26-27	171	109	358	180	73	0	0	49	0	0	55	995
28-29	98	463	416	473	619	100	64	340	0	0	501	3074
30-31	377	818	880	926	1575	157	157	737	15	6	1015	6663
32-33	1117	1633	1450	2011	2921	506	227	1432	121	346	2750	14504
34-35	2882	4231	2195	3574	5835	1092	516	2579	270	806	4762	28742
36-37	4844	7563	4422	7103	9328	1896	1086	4047	546	1674	5876	48385
38-39	5907	9010	5395	9813	13672	3310	1527	5239	867	3203	5779	63722
40-41	7765	12153	6316	11751	15360	4536	2082	6351	984	5037	6185	78520
42-43	8860	12592	6266	11894	13669	5063	2543	6336	1292	6169	6553	81237
44-45	7988	13257	7101	11658	13273	5918	2803	5337	976	5360	5090	78761
46-47	7503	12619	7092	10616	12342	5406	2628	4564	948	4609	4471	72798
48-49	6777	9915	7308	10123	10319	4723	2727	4173	914	3369	3691	64039
50-51	5251	8590	7278	8287	8854	3467	2205	2463	702	2754	2742	52593
52-53	4502	5948	6348	6529	7505	2610	1823	1985	499	2126	2014	41889
54-55	3466	4634	5892	4799	6292	1529	1708	1382	397	1788	1987	33874
56-57	2849	3632	4492	3630	5207	1003	1083	986	265	1583	1366	26096
58-59	2155	2421	3349	2492	3091	883	842	463	106	1082	1249	18133
60-61	1634	2008	2942	1720	2325	468	498	430	94	809	793	13721
62-63	1194	1489	2006	1177	1502	363	462	132	87	498	411	9371
64-65	1262	1428	1443	852	897	328	332	31	55	402	187	7267
66-67	917	1251	1146	639	696	127	151	31	47	355	273	5683
68-69	609	974	1150	566	435	134	127	37	43	285	278	4638
70-71	811	994	857	364	392	120	122	57	18	242	178	4155
72-73	632	685	886	389	254	124	100	43	6	196	140	3455
74-75	674	559	742	305	167	53	80	10	6	170	106	2872
76-77	448	573	610	228	219	56	46	31	12	135	149	2507
78-79	1725	1909	1578	658	389	270	208	62	58	594	379	7830

Total	82482	121492	89960	112769	137250	44242	26154	49467	9328	43598	59035	775777
Catch (k)	83895	115922	100035	98779	115168	38250	25647	35583	7867	41302	45168	707516
Measur.	6427	11313	10683	12133	12133	4492	2302	4397	1132	4706	3112	72820
Samples	45	64	62	60	60	25	21	26	6	33	27	429

Length	Division 3M											Total
	Jan	Feb	Mar	Apr	May	Jun	Aug	Sep	Oct	Nov	Dec	
26-27	0	10	0	0	0	0	0	0	0	0	0	10
28-29	0	6	0	20	0	0	0	33	0	0	0	59
30-31	0	37	0	114	0	5	0	109	0	0	7	272
32-33	26	72	28	191	4	5	0	274	0	0	65	665
34-35	75	265	57	453	43	22	25	257	3	0	134	1334
36-37	105	629	168	974	126	34	35	358	12	0	85	2526
38-39	376	1533	446	2061	159	70	137	755	50	0	171	5758
40-41	419	2376	866	3351	351	134	264	1147	56	0	410	9374
42-43	545	2485	1431	4132	607	246	378	1350	141	0	319	11634
44-45	638	2868	2066	5175	783	412	402	1385	112	6	482	14329
46-47	657	2788	2838	6104	977	574	383	1188	183	8	369	16069
48-49	429	2631	3642	6185	1134	581	493	730	265	21	319	16430
50-51	345	2303	3900	5664	1141	680	346	543	210	25	257	15414
52-53	277	1690	3862	5598	1139	678	333	286	247	37	312	14459
54-55	119	1583	3526	4792	844	783	443	104	210	34	105	12543
56-57	126	1353	2766	3846	767	635	382	163	233	36	58	10365
58-59	72	902	2178	2539	625	565	358	86	232	17	105	7679
60-61	53	736	1547	1864	501	373	245	30	171	15	48	5583
62-63	16	573	1088	1052	422	326	287	13	152	10	18	3957
64-65	59	349	775	906	300	253	118	0	140	6	45	2951

Table 9. (Continued)

Length	Division 3M											
	Jan	Feb	Mar	Apr	May	Jun	Aug	Sep	Oct	Nov	Dec	Total
66-67	35	197	582	650	220	278	124	0	86	2	37	2211
68-69	49	192	505	436	201	162	105	13	77	2	7	1749
70-71	20	243	425	344	179	137	51	13	62	4	0	1478
72-73	61	165	358	191	115	123	69	13	87	2	25	1209
74-75	20	210	180	251	128	109	43	13	83	2	15	1054
76-77	7	114	213	194	140	102	11	0	96	0	7	884
78-79	22	389	706	424	305	244	204	0	271	0	52	2617
Total	4551	26699	34153	57511	11211	7531	5236	8863	3179	227	3452	162613
Catch (k)	4250	49617	77710	106107	26795	20275	12147	10076	10513	568	5624	323682
Measur.	501	3829	7287	9766	2400	1879	631	575	1014	108	319	28318
Samples	3	19	40	52	10	7	6	3	6	1	3	150

Length	Division 3N											
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
20-21	0	0	0	0	0	11	0	0	0	0	11	
22-23	0	0	0	0	0	42	22	7	10	0	81	
24-25	8	0	0	0	12	198	62	14	55	0	349	
26-27	12	0	0	5	47	458	243	32	111	0	908	
28-29	20	3	0	29	583	1372	366	149	290	0	2812	
30-31	12	6	4	20	2524	2382	1252	885	431	0	7516	
32-33	4	13	17	20	3192	2551	1855	1748	946	0	10346	
34-35	20	34	62	38	4523	3033	1980	2354	1060	0	13104	
36-37	20	61	81	57	4963	3543	2238	1891	1015	63	13932	
38-39	36	127	220	72	4733	4465	2433	2879	1149	59	16173	
40-41	67	208	325	87	5046	4440	2413	3040	1273	104	17003	
42-43	86	302	567	135	4912	5151	2211	3097	1703	182	18346	
44-45	105	312	732	115	3991	5120	2032	2757	1497	236	16897	
46-47	110	461	961	115	4963	5074	1881	2233	1681	224	17703	
48-49	102	609	1090	96	3863	4256	1560	2113	1301	321	15311	
50-51	118	588	1069	86	3621	3763	1839	2168	1163	333	14748	
52-53	117	557	1051	39	3612	2617	1478	1420	812	269	11972	
54-55	110	547	734	48	2544	1920	1210	1494	875	283	9765	
56-57	86	430	623	15	1816	1339	883	1284	656	288	7420	
58-59	55	268	303	10	1009	1026	710	803	507	256	4947	
60-61	20	298	249	5	632	746	327	337	344	98	3056	
62-63	12	238	122	5	418	512	347	376	367	109	2506	
64-65	31	115	87	0	306	456	294	219	240	197	1945	
66-67	32	186	73	0	211	271	248	86	178	59	1344	
68-69	24	154	56	0	237	341	132	209	117	59	1329	
70-71	4	139	43	0	209	321	135	100	59	18	1028	
72-73	20	106	39	0	146	205	90	62	116	27	811	
74-75	4	58	28	0	36	150	22	57	33	31	419	
76-77	0	73	34	0	30	135	33	29	13	19	366	
78-79	4	99	49	0	319	255	66	45	86	0	923	
Total	1239	5992	8619	997	58498	55898	28362	31888	18088	3235	212816	
Catch (k)	385	8320	9606	739	45568	45141	22417	25584	15894	3816	177470	
Measur.	315	1220	1920	207	4318	5972	3370	2845	2242	382	22791	
Samples	1	5	9	1	34	41	21	24	23	3	162	