

Northwest Atlantic  Fisheries Organization

Serial No. N849

NAFO SCR Doc. 84/VI/60

SCIENTIFIC COUNCIL MEETING - JUNE 1984

The Fishery for Greenland Halibut in NAFO Subarea 0+1

by

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Landings

Landings of Greenland halibut in NAFO Subareas 0 and 1 since 1969 are presented in Table 1 by country and division and total catch in Fig. 1. The main exploiter of Greenland halibut in Subarea 0 is the Soviet Union with the largest total catches of 4900 t and 4100 t taken in 1976 and 1977 respectively where the Soviet Union accounted for 77% of the catch for both years combined. In Subarea 1 the main exploiters have been historically by Greenland with the Soviet Union accounting for most of the catch in the mid 1970's. Since 1977, there have been no landings reported by the Soviet Union with almost the entire catch taken by Greenland. It should be pointed out, however, that catches by Subarea prior to 1979 is based upon the ICNAF conventional line between divisions whereas catches since 1978 are based upon the jurisdictional equidistant line between Canada and the EEC.

Landings for both divisions combined ranged from 1884 in 1970 to 24,948 t in 1975. The provisional catch in 1983, was 5,751 tons.

Catch-effort by USSR in Subarea 0

Since the Soviet Union is the main prosecutor of Greenland halibut in Subarea 0 some CPUE data were available from the Canadian foreign observer program since 1979. The main fishery took place in the second half of the year and, in most cases, the last quarter (Table 2). During these years fishing was carried out in the general vicinity of the southeast portion of NAFO Div. OB (Fig. 2). Although Fig. 2 is for September 1983, it generally applies to all other years and months where observations were available. Catch rates fluctuated from month to month (Table 2), however, in most cases the better rates were in the latest months of the year. The annual catch rates also fluctuated from 0.802 t/hr in 1983 to 1.38 t/hr in 1980 (Table 2; Fig. 3). The average depths of the fishery ranged from 674 m in September 1982 to 978 in December 1981. The overall average depth fished was 818 m.

Length frequency distributions

Length frequency data were available from the Soviet fishery since 1979 and from the Faroese fishery using longlines in 1983 (Fig. 4). The length distributions of Soviet catches were of much the same pattern (Fig. 4). From 1980 to 1983 the catches were comprised mainly of 1972-76 year-classes with the mode increasing slightly from year to year. This is probably the result of emigration of the stronger year-classes from southern areas upon approaching maturity. The length frequency distribution for the Faroese longline data show much larger fish than Soviet catches with more than half of the catch greater than 70 cm. The Faroese fishery occurred in the same general area as the Soviet fishery at an average depth of about 900 m. It would suggest that the catchability of large Greenland halibut by otter trawl may be probably quite low. On the other hand the Faroese catches were in June-August and probably consisted largely of post-spawning fish compared to the fall fishery of the Soviet Union when pre-spawning fish may be further northward.

Table 1. Nominal catches (t), by country, of Greenland halibut in NAFO Subareas 0 and 1.

Sub-area	Country	Year															Total
		69	70	71	72	73	74	75	76	77	78	79	80	81	82 <sup>a</sup>	83 <sup>a</sup>	
0	Denmark (F)	-	-	-	-	-	-	825	916	930	550	50	60	170	337	765	4,603
	Denmark (G)	-	-	-	-	912	4	288	-	-	-	-	1	-	-	-	1,205
	GDR	-	-	-	563	-	-	-	-	240	-	-	-	-	-	-	803
	Norway	-	-	-	-	-	24	-	-	-	146	-	-	-	-	-	170
	USSR	813	215	1,298	9,397	1,218	861	455	3,990	2,967	-	987	1,546	-	965	818	25,530
	FRG	-	-	-	-	-	-	-	-	-	-	94	-	-	-	-	94
	Can-M	-	-	-	-	-	-	-	-	-	-	-	136	-	-	-	136
	Total	813	215	1,298	9,960	2,130	889	1,568	4,906	4,137	696	1,131	1,743	170	1,302	1,583	32,541
1	Denmark (F)	1	-	38	442	-	-	-	34	77	2	-	-	-	-	-	594
	Denmark (G)	1,477	1,212	1,159	2,950	3,655	4,054	3,436	3,546	6,110	5,985	5,273	5,355	5,755	5,300	4,140	59,407
	Denmark (M)	-	-	-	20	5	-	2	3	-	-	-	-	-	-	-	30
	FRG	68	13	16	128	65	2	24	93	590	4,965	12,784	1,174	10	8	18	19,958
	GDR	-	-	112	-	754	601	56	160	335	-	-	-	-	-	-	2,018
	Norway	19	-	1,168	12	35	12	37	7	11	5	-	-	-	-	-	1,306
	Poland	1	-	-	135	-	-	-	-	-	-	-	-	-	-	-	136
	Portugal	-	-	-	-	-	32	41	95	-	-	-	-	-	-	-	168
	UK	-	-	-	-	1	18	9	-	-	-	-	-	-	-	-	28
	USSR	123	444	545	245	2,913	8,650	19,775	6,944	1,389	-	-	-	-	-	-	41,028
	Total	1,689	1,669	3,038	3,932	7,428	13,369	23,380	10,882	8,512	10,957	18,057	6,529	5,765	5,308	4,168	124,673
Total 0+1	2,502	1,884	4,336	13,892	9,558	14,258	24,948	15,788	12,649	11,653	19,188	8,272	5,935	6,610	5,751	157,214	

<sup>a</sup>Provisional

Table 2. Commercial catch rate information on Greenland halibut from the USSR (OTB7) in NAFO Division OB.

Month	Total weight (t) all species	Weight (t) G. halibut	% G. halibut	Sets observed	Average depth (m)	Catch hour (t)	c.v.
<b>1979</b>							
Dec.	86.3	79.6	92.6	28	880	1.104	0.083
<b>1980</b>							
Oct.	66.3	49.2	74.2	36	826	0.470	0.110
Nov.	996.6	816.1	81.9	184	853	1.477	0.037
Dec.	650.3	546.7	84.1	133	946	1.496	0.051
All	1713.2	1411.9	94.6	353	884	1.381	0.031
<b>1981</b>							
Sept.	14.5	12.4	31.9	29	753	0.153	0.113
Oct.	138.4	118.5	54.4	113	748	0.340	0.062
Nov.	1127.5	934.4	89.1	345	777	1.087	0.024
Dec.	470.6	408.5	83.8	178	978	0.937	0.034
All	1751.0	1473.7	82.2	665	823	0.854	0.024
<b>1982</b>							
Aug.	108.4	88.7	96.1	40	776	1.095	0.073
Sept.	756.8	608.1	97.9	124	674	2.148	0.046
Oct.	113.4	93.9	95.0	43	785	0.971	0.079
Nov.	1064.4	863.4	90.0	311	851	1.091	0.030
All	2043.2	1654.0	93.4	518	797	1.321	0.027
<b>1983</b>							
Aug.	152.9	125.5	83.3	72	859	0.620	0.062
Sept.	898.9	767.1	93.1	294	838	0.848	0.023
Oct.	59.1	48.4	92.0	22	725	0.729	0.078
All	1110.9	941.0	91.6	388	835	0.802	0.022

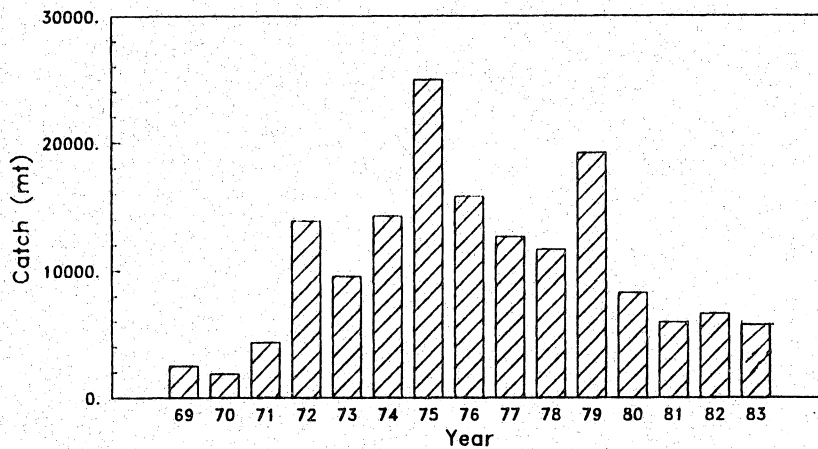


Fig.1: Nominal catches of Greenland halibut from SA 0+1, 1969-1983. (1983 Provisional)

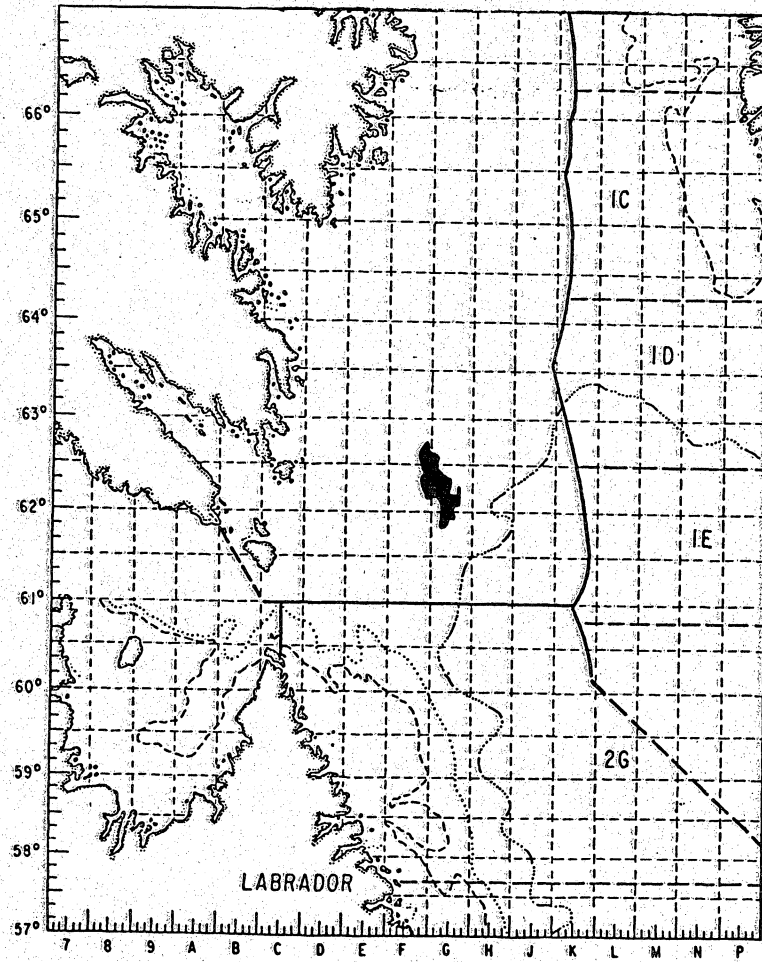


Fig. 2. Distribution of USSR fishing effort for Greenland halibut in NAFO Division 0B in September 1983.

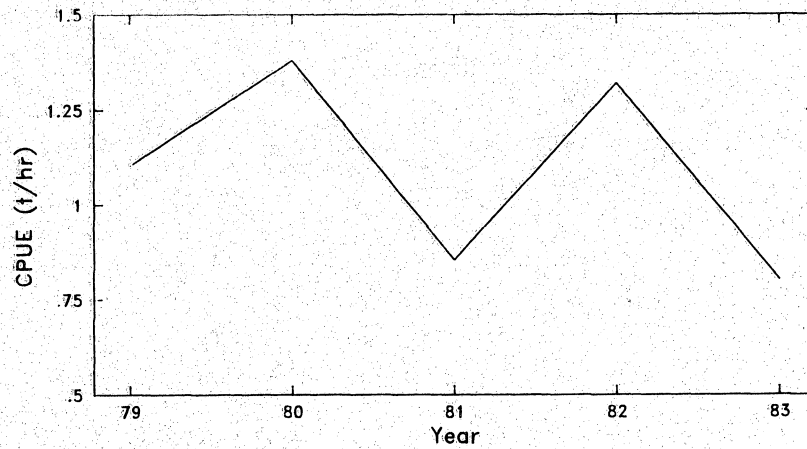


Fig.3: CPUE for Greenland halibut in SA 0B 1979-1983, for USSR (OTB7).

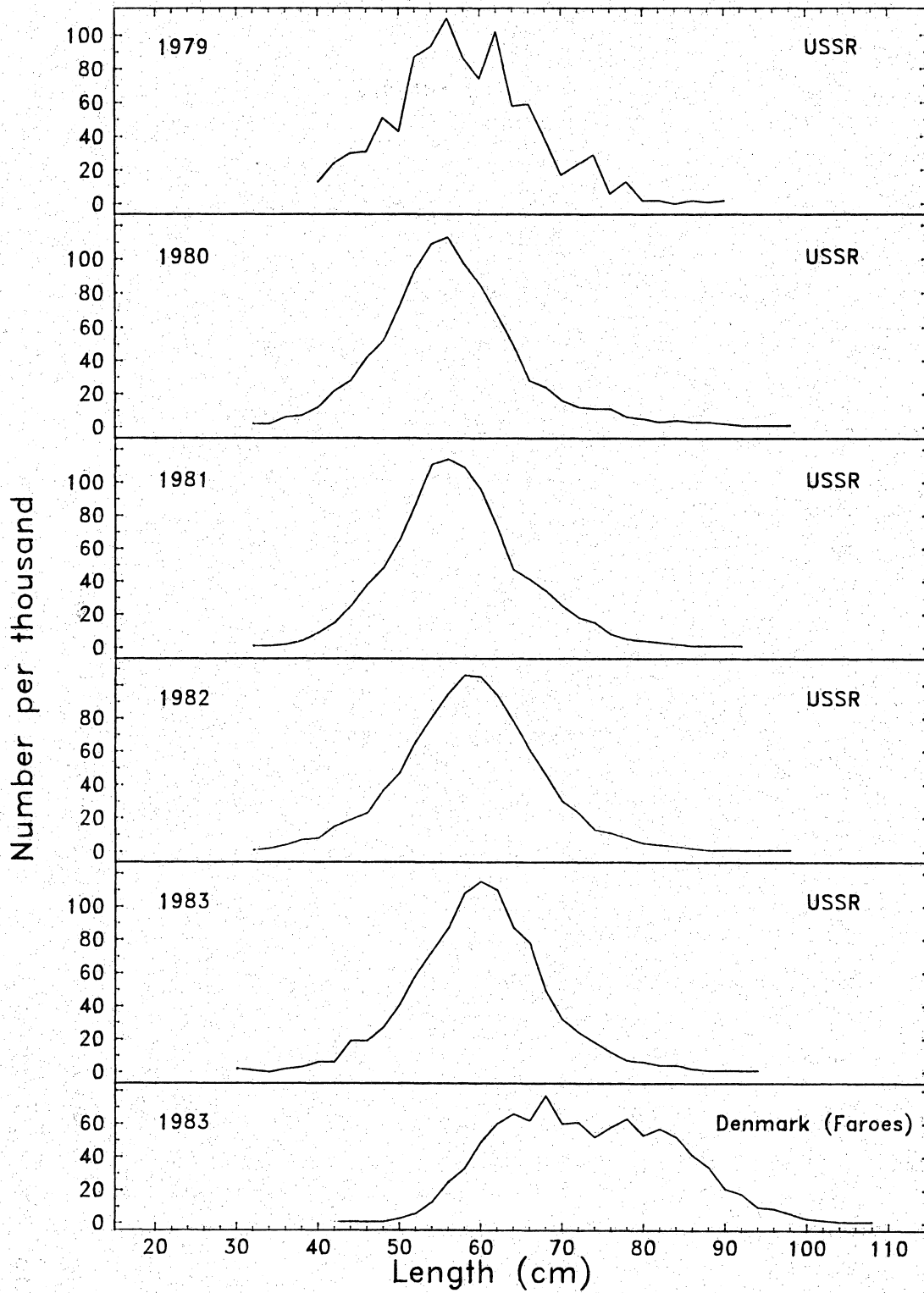


Fig.4: Commercial frequencies from Greenland halibut fishery in SA 0 (FCR sampling).

