

Northwest Atlantic



Fisheries Organization

Serial No. N2831

NAFO SCS Doc. 97/4

SCIENTIFIC COUNCIL MEETING - JUNE 1997

German Research Report for 1996

by

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Sub-area 1

A. Status of the Fishery

In 1996, fishing was conducted with low effort in Division 1D directed towards Greenland halibut since fishing activities of the far distance fleets were transferred mainly to the oceanic redfish stock in the Reykjanes-Ridge area. By end of the year, reported catches amounted to 452 tons of Greenland halibut and 5 tons of roundnose grenadiers as by-catch. Tables 1 and 2 list a breakdown of the effort, catches, and unstandardized CPUE by species, division, and month.

B. Special Studies

1. Environment

During the German groundfish survey off Greenland (06.10.-21.10.96), fishery oceanographic measurements were performed at 55 fishing stations by means of CTD/rosette. Additionally, temperature and salinity at stations of 2 NAFO standard oceanographic sections off West Greenland (Cape Desolation and Fyllas Bank) were measured in order to describe climatic trends. For the annual meeting of the Scientific Council of NAFO a climatic review for the Greenland area was prepared which comprised information on air temperature anomalies and ice distribution (Stein, 1997 a). In addition, thermohaline properties on the fishing banks off East and West Greenland were described (Stein, 1997 b). For the period 1982-96, the trend in near bottom temperature regime was analysed based on measurements at fishing stations conducted during the surveys (Rätz, 1997).

2. Biological Studies

Since 1982, annual groundfish surveys were conducted. During the fourth quarter, stratified random surveys covered shelf areas and the continental slope off West Greenland (Divisions 1B-1F) outside the 3-mile limit to the 400m isobath. In October 1996, 55 valid hauls were carried out and the standard survey area was completely covered. Total catch amounted to 1,506 kg. 33,555 specimens were classified to 49 taxonomic units. Assessments of the stock status for ecologically and economically important groundfish species were documented (Rätz, 1997). For the first time, the status and trends of the demersal fish stocks off East Greenland were presented and compared with those off West Greenland.

One sample of Greenland halibut length measurements was provided by direct observations on board off a commercial vessel. The sample was taken during the fourth quarter and consisted of 149 individual

measurements. The sample weight amounted to 220 kg. The range in total length varied between 41 and 87 cm. The bulk of fish had a body length of 49-54 cm, the mean amounting to 53.7 cm (Tab. 4, Fig. 1).

Sub-areas 2 and 3

A. Status of the Fishery

In 1996, fishing was conducted with low effort in Division 3M directed towards Greenland halibut and cod. By end of the year, reported catches totaled 16 tons of cod in Division 3M and 24 tons of Greenland halibut with negligible amounts of roundnose grenadiers as by-catch. Tables 1, 2 and 3 list a breakdown of the effort, catches, and unstandardized CPUE by species, Division, and month. Official logbook statistics were in good agreement with data derived from the EU observer program the total difference in catch figures amounting to 2%. No fishing activities were recorded in Sub-area 2.

B. Special Studies

1. Environment

No research in relation to environment was carried out by Germany in NAFO Sub-areas 2 and 3.

2. Biological studies

No biological samplings or studies were performed by Germany in NAFO Sub-areas 2 and 3.

References:

- Rätz, H.-J. 1997. Structures and Changes of the Demersal Fish Assemblage and Trends in Near Bottom Temperature off Greenland, 1982-96. Announced for NAFO Scientific Council Meeting June 1997.
 Stein, M. 1997 a. Climatic Conditions Around Greenland - 1996. Announced for NAFO Scientific Council Meeting June 1997.
 Stein, M. 1997 b. Thermohaline Properties on the Fishing Banks off East and West Greenland. Announced for NAFO Scientific Council Meeting June 1997.

Table 1 German effort (hours fished), catches (tons, preliminary) and unstandardized CPUE (kg/h) and accompanied standard deviations for Greenland halibut by division and month, 1996.

Month	Effort 1D	Catch 1D	CPUE 1D	St.Dev.	Effort 3M	Catch 3M	CPUE 3M	St.Dev.
September	74	19	265	97	0	0		
October	490	136	270	104	0	0		
November	562	259	457	147	0	0		
December	90	37	415	150	155	25	161	48
Σ	1217	452	365	158	155	25	161	48

Table 2 German effort (hours fished), catches (tons, preliminary) and unstandardized CPUE (kg/h) and accompanied standard deviations for roundnose grenadiers by division and month, 1996.

Month	Effort 1D	Catch 1D	CPUE 1D	St.Dev.	Effort 3M	Catch 3M	CPUE 3M	St.Dev.
September	69	1	18	8	0	0		
October	307	4	13	35	0	0		
November	481	0	1	2	0	0		
December	90	0	1	2	149	0	0	0
Σ	947	5	6	22	149	0	0	0

Table 3 German effort (hours fished), catches (tons, preliminary) and unstandardized CPUE (kg/h) and accompanied standard deviations for cod by division and month, 1996.

Month	Effort 3M	Catch 3M	CPUE 3M	St.Dev.
December	52	16	339	247
Σ	52	16	339	247

Table 4 Length frequency of Greenland halibut derived from a commercial catch taken in NAFO Sub-area 1 in the 4th quarter 1996, n=149, weight=220 kg.

Length (cm)	Frequency	57.5	3	75.5	1
40.5	0	58.5	6	76.5	0
41.5	1	59.5	0	77.5	0
42.5	0	60.5	2	78.5	0
43.5	2	61.5	2	79.5	0
44.5	2	62.5	2	80.5	0
45.5	3	63.5	0	81.5	0
46.5	4	64.5	3	82.5	0
47.5	6	65.5	1	83.5	0
48.5	8	66.5	0	84.5	0
49.5	16	67.5	1	85.5	1
50.5	16	68.5	1	86.5	0
51.5	17	69.5	1	87.5	1
52.5	10	70.5	2	88.5	0
53.5	10	71.5	0	89.5	0
54.5	11	72.5	1	90.5	0
55.5	9	73.5	0		
56.5	6	74.5	0		

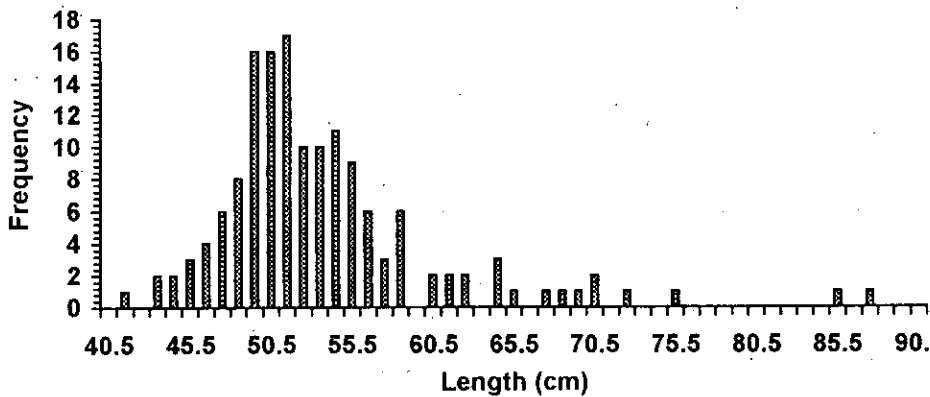


Fig. 1 Length frequency of Greenland halibut derived from a commercial catch taken in NAFO Sub-area 1 in the 4th quarter 1996, n=149, weight=220 kg.