



Serial No.1714
(D.b)

ICNAF Res.Doc.66/82
(Revised)

ANNUAL MEETING - JUNE 1966

Summary of Research and Status of the Fisheries in Subarea 1 during 1965

by P.M.Hansen

This summary is based on research reports from the following countries (1966 Res.Doc. number given in brackets): Canada (30), Denmark (31), Germany (33a), Iceland (34), Norway (35), Poland (36), Portugal (37), Spain (38), UK (40), USSR (39) and one non-member country (Ser.No.1688).

A. Status of the Fisheries (Tables 1 and 2)

Cod: The inshore fishery gave better landings of cod than in the year before. Good pound net catches, but of small cod, were obtained from May to July in Div.1B, 1C and 1D. In 1B all fish were used for filleting. In 1C and 1D the largest part was used for fishmeal production. Also the inshore longline and handline fisheries were better than in 1964.

The offshore fishery was carried out by all nations mentioned above with the exception of Canada. Poland, Spain and USSR carried out only an insignificant fishery in Subarea 1. Contrary to Germany, Norway and UK, Portugal and Iceland had had greater landings in 1965 than in 1964. The decrease in the German landings applies also to waters off Southeast Greenland.

Redfish: The redfish fishery was poor in 1965. The German and Icelandic landings of redfish both decreased from 1964 to 1965.

Salmon: Landings from the Greenlanders' inshore gillnet fishery were only about half as great as in 1964. Two vessels, a Norwegian and a Faroese, fished offshore with drift nets. The former gave up rather early owing to poor fishery, while the latter obtained a catch of 40 tons of salmon of high quality.

Table 2. Nominal catch (metric tons, live weight) in Subarea 1 in 1964 and 1965. Figures taken from FAO tables: ICNAF Res.Doc.66/1 and 66/3).

	<u>Cod</u>		<u>Redfish</u>		<u>Total All Species</u>	
	1964	1965	1964	1965	1964	1965
Denmark (F)	65,479	65,782	12	-	65,930	65,818
Denmark (G)	21,986	24,322	222	265	37,212	39,725
France	34,797	40,091	-	-	34,798	40,108
Germany	94,539	103,745	14,346	15,640	130,199	125,933
Iceland	2,474	3,327	1,955	1,254	4,525	4,694
Norway	34,586	33,349	116	37	34,961	33,514
Poland	92	38	3	3	95	45
Portugal	53,214	60,683	-	-	53,214	60,683
Spain	743	650	-	-	743	650
USSR	-	1,251	-	130	-	1,456
UK	26,735	14,040	523	240	28,500	14,945
non-member	15,093	11,099	2,836	3,438	21,976	17,616
Total	349,738	358,377	30,012	21,007	411,973	405,187

B. Work Carried Out

- (a) Canada: R/V *A.T. Cameron*, 10 July-25 August. Oceanographic work in the Davis Strait. Plankton collections by 2 m stramin net. Collection of fish larvae. Sampling of material for studies of cod and redfish. Deep trawling and longlining experiments on the slopes of the banks. Drift net fishing for salmon was carried out in August. Catch, 33 salmon in Subarea 1.
- (b) Denmark: R/V *Adolf Jensen*, Faroese trawler *Skalaberg* (R/V *Dana* not available owing to docking). Very limited hydrographic work on offshore banks owing to lack of *Dana*. Hydrographic work in inshore waters especially at fixed stations in 1D. Sampling of cod for age

Table 1. Subarea 1. Landings (= Nominal catches). Landings per unit effort and fishing activity, 1957-1965

	1957	1958	1959	1960	1961	1962	1963	1964	1965 ⁽¹⁾
Landings (000's tons)									
All gears	269	320	234	243	345	451	406	350	358
Cod	28	18	33	44	54	60	47	30	24
Redfish									
Total (all species)	304	345	273	295	414	526	474	413	405
O.Trawl	140	173	110	101	171	247	244	250	-
Total (all Species)	169	192	143	147	236	318	306	290	-
Landings (tons) of O. Trawlers (all size groups) per day on ground (all groundfish species)	19.6	19.6	16.1	17.7	18.7	22.4	19.7	-	-
Landings (tons) of O. Trawlers per day fished (all ground-fish species)	-	-	-	-	-	29.1	25.1	20.3	-
O.Trawl Days on ground	7,614	9,781	8,864	8,286	12,618	14,165	15,519	-	-
Days fished						10,928	12,185	14,282	-
Days on ground	15,500	17,600	18,200	16,200	22,100	23,400	24,100	-	-
Days fished						18,100	18,900	20,050	-

(1) Provisional figures

and length studies and tagging of cod and redfish. Salmon tagging on sampling of material for salmon studies in collaboration with Scottish experts.

- (c) Germany: R/V *Walther Herwig*, R/V *Anton Dohrn* and commercial trawlers. Hydrographic work in the Davis Strait and off Southeast Greenland. Sampling of material of cod. Cod tagging off West and East Greenland. Trawling in deep water.
- (d) Iceland: Commercial trawlers. Samples of material for studies on cod from commercial catches from West and East Greenland.
- (e) Norway: R/V *Johan Hjort* April-May. Hydrographic work in the Davis Strait. Fishing with Hensen net for fish eggs and larvae. Otoliths and measurements of cod collected of trawl and longline catches for studies of differences in age composition.
- (f) Poland: No research work carried out in Subarea 1.
- (g) Portugal: No research work carried out in Subarea 1.
- (h) Spain: Commercial trawlers. Samples of cod otoliths in 1B.
- (i) United Kingdom: Commercial trawlers. Samples of cod otoliths and measurements. Plankton recorders have been used for studies of the occurrence of fish larvae and of the food of larval redfish and cod.
- (j) USSR: R/V *Topseda* and R/V *Sevastopol* June, July, August, December. Meteorological and oceanographic observations in Subarea 1. Research on occurrence of cod in the Davis Strait. Sampling of cod otoliths and measurements.
- (k) Non-members: R/V *Ernst Haeckel* 2-15 May and 30 May-16 June. Oceanographic work in the Davis Strait. Research on occurrence of cod and sampling of material of cod otoliths and measurements. Cod tagging. Trawling in deep water west of Lille Hellefiske Bank and Fylla Bank. Experiments with transference of cod from Southwest Iceland to Southwest Greenland and from southern to northern banks in the Davis Strait.

C. Hydrography and Plankton

The winter 1964-65 was unusually mild. In deep waters in the Davis Strait the temperatures were high. The Atlantic component of the West Greenland current was stronger than normal. There was a heavy ice drift from East Greenland to 1F and 1E. Samples of zooplankton and phytoplankton have been collected.

D. Cod

(a) Eggs and larvae

Cod eggs have been collected by Norway in April and May in the Davis Strait and by Denmark in inshore waters. Nothing can be said about the distribution because the material has not been worked up. Owing to the rather high sea temperatures, it is possible that the cod year-class 1965 will be good.

(b) Cod age-groups 1, 2 and 3

Very few small cod belonging to these age-groups were caught in seine and shrimp trawl and also few were observed in shallow water. There is therefore reason to believe that the year-classes 1964, 63 and 62 are poor year-classes or at least below average.

(c) Commercial stock of cod

Inshore waters

Many small fish, of which large amounts were used for production of fish meal, were caught in pound nets. In catches with handlines and longlines the two year-classes 1960 and 1961 predominated, the former especially

in the northern Div. 1A-1D, the latter in the southern divisions. Among the older year-classes 1957 was found in 1A while 1958 occurred mostly in 1E and 1F.

Offshore waters

The offshore distribution of year-classes of cod was rather similar to that in inshore waters. Nearly all samples analysed were from trawl catches.

The cod fishery in 1965 was based mainly on the two rich year-classes 1960 and 1961. These small cod have already been heavily exploited. Compared to these two year-classes, the older year-classes were of minor abundance although they, due to the greater weight of the single specimens, have contributed somewhat to the total landings. In the German samples the year-classes 1958, 57 and 56 were rather common in 1D, 1F and in the samples from East Greenland they were the predominant year-classes. The year-classes 1958 and 1956 were considered to be of East Greenland origin whereas that of 1957 has been considered to belong to the West Greenland stock. The year-class 1957 was the predominating year-class in 1A, 1B, 1C and 1D some years ago but in more recent years it has been found in larger numbers in 1E and 1F. According to the German report the year-classes 1956 and 57 occurred only in the spawning season and in such small numbers that most trawlers went to Labrador where the fishery was better.

In the past five years cod have grown better than in the period 1953-60 and there has been an average increase in weight of 32% in each age group.