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Summary of Research and Status of Fisheries in Subarea 1

1966

by

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This summary is based on research reports from the following countries (Research Document number in brackets): Canada (11); Denmark (12); France (13); Germany (14); Iceland (15); Norway (16); Poland (17); Portugal (18); Spain (19); U.K. (20); USSR (21).

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

Cod : The inshore fishery carried out by Greenland fishermen was about 30,000 tons, which is 5,000 tons more than in 1965. Two fishing vessels of 100 tons and two of 200 tons have carried out cod fishing also on the banks. The catch was used for production of frozen fillets. Small cod taken in pound nets have been used for fish meal.

The offshore fishery has been carried out by all nations mentioned above with the exception of Canada. Poland had only 44 fishing days with two factory trawlers. The fishery was stopped owing to rough bottom after having taken 799 tons, of which 468 tons were fished in Div. 1B. Also USSR carried out an insignificant fishery in Subarea 1. In Division 1C a large refrigerator trawler fished in a short period.

The landings of cod and redfish fished by Iceland fishing vessels were smaller than in the two previous years, especially the landings of cod. Germany got very small catches compared with catches in previous years, both in West and East Greenland waters. The German catch of cod in Subarea 1 was 83,000 tons.

The Portuguese fishery was better than in 1965. Of the total catch of 75,410 tons, the dory got 73,357 tons. France had nearly the same amount of cod in Subarea 1 as in 1965, while U.K.'s catches of cod increased considerably; from 14,000 tons in 1965 to 21,000 tons in 1966.

Redfish: Only two nations have fished for redfish. Iceland fished nearly the same quantity as in the two last years, while the German fishery decreased both in West Greenland and in East Greenland waters.

B. Work Carried Out

a. Canada

Hydrographic and geological research work in northern Baffin Bay and Davis Strait.

b. Denmark

R/V Adolf Jensen, R/V Dana and Faroese Trawler Skalaberg. Hydrographic work in coastal waters, especially at fixed station in 1D, and in the Davis Strait.

Biological work: studies on occurrence of cod larvae in the Davis Strait. Sampling of material for studies of the age composition of cod stock and for age and growth studies of cod. Tagging experiments with cod and redfish. Salmon research work in collaboration with Scottish, English, and Canadian experts.

c. Germany

Hydrographic studies carried out in October 1966. Biological studies were carried out by factory trawlers and R/V Anton Dohrn. Collecting of material on cod for studies of age and size of cod and composition of year-classes in the cod stock. Observations on spawning cod. Studies on the strength of the 1962 and 1963 year-classes. Age of maturity of cod. Collection of small redfish for age studies. Studies on selectivity of different mesh sizes.

d. Iceland

Sampling of material for studies of age and length of cod mainly from Div. 1D in April and May; also some material on cod from East Greenland has been collected.

e. Norway

Johan Hjort worked in Divisions 1E, 1D, 1C, and 1B. In the period 29 March to 4 April, hydrographic work has been carried out in order to study the Irminger component of the West Greenland current. Bottom longline and trawl have been used for studies on cod year-classes. To study occurrence of small cod, covered cod-end has been used. Occurrence of cod eggs in the Davis Strait has been studied.

f. Poland

No scientific work has been carried out.

g. Portugal

No scientific work in Subarea 1.

h. Spain

No scientific work.

i. U.K.

Biological research work on cod in 1F and 1A-1D. Ernest Holt has in October fished in 1A, B, C, and D for Atlantic salmon for tagging. Research work on salmon in company with Danish scientists.

k. USSR

R/V Pobeda worked in periods May-August and September-November. Biological research with cod food (Euphausia, launce, shrimps) and food migration of cod. Hydrography.

C. Hydrography

The winter 1965-1966 was rather mild. In inshore waters on a station at the entrance to Godthab Fjord temperatures below zero were not measured in the winter. In the Davis Strait the surface temperatures were very low in the early spring and much ice was observed in the sea. In deep water the temperatures were unusually high, especially in Div. 1A, 1B, 1C, and 1D. The Irminger component of the West Greenland current was well developed. There seemed to be an inflow of cold polar water in the southern part of the area in August.

D. Biological Studies of Fish by Species

1. Cod

(a) Eggs and larvae. Cod eggs have been collected by Norway in early spring. Preliminary results seem to indicate that very few

cod eggs were found. In July cod larvae were fished for, with stramin bag in Div. 1B, 1C, and 1D. The occurrence was very poor. The best catches were taken in 1C. The year-class 1966 seems to be poor.

(b) Cod age-groups 1, 2, and 3. The small cod belonging to these age groups were not abundant. The best year-class seemed to be 1963. This is surprising because this year-class was considered to be very poor owing to the low number of cod larvae found at West Greenland at the Norwestlant in 1963. The explanation may possibly be that small cod of this year-class have been transported by the current from cod spawning places which were found in 1963 off East Greenland south of Amazo salik. That the year-class 1963 is more numerous than the other young year-classes does not mean that it is a rich year-class. Possibly all the young year-classes are poor, the year-class 1963 included.

(c) Commercial stock of cod. The commercial stocks of cod in the inshore waters and in the offshore waters are very much alike. Two rich year classes, 1960 and 1961, predominate very strongly. It seems that the year-class 1961 has a more southerly distribution than the year-class 1960. The year-classes 1957 and 1956 have nearly disappeared from the catches.

(d) Tagging. Tagging of cod has been carried out in offshore as well as in inshore waters. Only Denmark and USSR have carried out tagging of cod. Denmark has tagged 2,905 cod. From previous Danish experiments in 1959-66, 431 recaptures have been reported in 1966. Of these cod 382 have been recaptured in West Greenland waters; 7 were taken off East Greenland, and 39 in Iceland waters.

USSR have tagged 4500 cod. From an experiment with 2000 cod, 12% were recaptured.

(e) Forecast for the cod fisheries. The two rich year-classes 1960 and 1961 will predominate the catches in 1967. 1960 year-class will occur in lesser numbers owing to a longer taxation by fishing. In Div. 1E and 1F small 4-year old cod will be common.

2. Atlantic Salmon

Experiments with driftnets have been carried out by R/V Dana in the Irminger Sea. Four salmon were caught. From mid-September to mid-November, research work was carried out by Scottish, English, Canadian, and Danish salmon experts. 728 salmon were tagged in Div. 1D.

130 salmon tagged in foreign rivers were recaptured in inshore waters in West Greenland. The recaptures are from tagging experiments made in following countries: Canada 111, England 6, Scotland 11, USA 2.

3. Redfish

177 redfish were tagged in Codthab Fjord. 21 redfish tagged in previous years were recaptured in 1966. Two of these recaptures were taken about six years after tagging. According to the experience obtained by the German fishery, the stock of redfish has decreased strongly in the last few years, both in West and East Greenland waters.

Table 1. Subarea 1. Landings (=Nominal catches), Landings per unit effort and fishing activity, 1957-1966.

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Landings (000's tons)										
All Gears	269	320	234	243	345	451	406	350	367	355
Cod	28	18	33	44	54	60	47	30	19	16
Redfish										
Total	304	345	273	295	414	526	474	413	411	391
(all species)										
Otter Trawl	140	173	110	101	171	247	244	250	209	192
Cod										
Total	169	192	143	147	256	318	306	290	238	202
(all species)										
Landings (tons) of Otter 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 Otter Trawlers per day fished (all groundfish species)	-	-	-	-	-	29.1	25.1	20.3	21.1	-
Estimated total fishing activity for all ground-fish species	7,614	9,781	8,864	8,286	12,618	14,165	15,519	-	-	-
Days on ground										
Days fished						10,928	12,185	14,282	11,281	-
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	19,481	-

(a) Provisional figures

TABLE 2 NOMINAL CATCH IN SUBAREA 1
in 1965 and 1966

Metric Tons Round Fresh

COUNTRY	COD		REDFISH		GRAND TOTAL	
	1965	1966	1965	1966	1965	1966
Denmark /F/	65,708	64,528	60	47	66,079	64,875
Denmark /G/	24,322	29,076	265	291	39,725	43,490
France	40,091	41,409	-	-	40,108	41,412
Germany	104,731	83,358	15,821	14,450	125,563	101,664
Iceland	3,973	1,965	1,254	969	5,340	3,149
Norway	32,064	34,735	56	25	32,206	34,842
Poland	38	799	3	46	45	846
Portugal	60,683	75,410	-	-	60,683	75,410
Spain	650	3,573	-	-	650	3,637
USSR	1,251	1,070	130	74	1,456	1,173
U.K.	13,850	19,436	239	177	14,695	20,658
Non-members	12,980	x	1,224	x	17,616	x
Total	360,341	355,359	19,052	16,079	404,166	391,158

Remarks:

1965 data - ICNAF Statistical Bulletin Vol. 15, for the year 1965

1966 data - ICNAF Res.Doc. 67/10

x = data not available for the time being.