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Summary of Research and Status of Fisheries in Subarea 1, 1964

by

P. M. Hansen

This summary is prepared from research reports from the following nations: Denmark, Germany, Iceland, Norway, Poland, Spain, United Kingdom and USSR.

1. Work carried out.

a. Denmark: R/Vs Dana and Adolf Jensen, Faroese commercial trawler Skálaberg. Oceanographic observations in Davis Strait and fixed inshore stations year round. Cod eggs collected in Godthåb Fjord and in coastal area around Godthåb, January to end July. Distribution and length and age of young and commercialsized cod. Cod tagging. Redfish growth studies and tagging in Godthåb Fjord. Studies on age and growth of salmon. Tagging of Greenland halibut, wolffish, herring and prawns.

b. Germany: R/V Walther Herwig and commercial trawlers. Oceanographic work off West, South and Southeast Greenland in June-July and November. Length and age composition of cod and tagging experiments with cod West and East Greenland.

c. Iceland: Commercial trawlers. Cod age and size compositions in West and East Greenland. Cod tagging off East Greenland.

d. Norway: R/V Johan Hjort. Oceanographic observations (like NORWESTLANT 1, 1963) off West and East Greenland. Fishing experiments with line and trawl. Cod age and size compositions. Distribution of cod eggs.

e. Poland: No research work carried out in Subarea 1.

f. Portugal: No research work in Subarea 1 reported.

g. Spain: No research work in Subarea 1 reported.

h. UK: No research vessels in Subarea 1. Continuous plankton recorder survey has been maintained and developed. Sampling of material of cod for age and length studies taken from landings of freezer trawlers and aboard Fairtry factory vessels.

i. USSR: Four exploratory and research vessels made oceanographic work in Davis Strait in January, May and July-September. Collection of plankton. Age and length compositions of cod. Redfish research with fine meshed trawl and midwater trawl. Serological studies on redfish.

2. Hydrography and Plankton.

The temperatures in the winter were very low in inshore as well as in offshore waters. In April the temperatures were lower than usual. In May the temperatures increased rapidly but were still low over

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the top of the banks. Unusually high temperatures were found on the slopes of the banks below about 200 m in July, which indicate a strong development of the warm Irminger current. The low temperatures in the surface layers are probably caused by the large masses of drift ice in the Davis Strait and low air temperatures in the winter 1963-64.

Samples of phyto- and zoo-plankton have been collected.

3. Eggs and larvae.

In inshore waters and in the fjords the occurrence of cod eggs was a little better than in the two previous years. In Davis Strait very few cod eggs were found by Norway. Probably the reason for this phenomenon must be that the low surface temperatures in spring have killed the eggs.

Cod larvae were found in July in still lesser numbers than in 1963. Thelargest number caught in 2 m stramin net was 13 which were taken on the middle of Fylla Bank. The total number of larvae in all 35 hauls with stramin net was 53.

4. Cod.

a. Age-groups 1, 2 and 3.

The 3-group (year-class 1961) seems to be a strong year-class which will be of importance in the commercial catches for the first time in 1966 especially in Divisions 1 B, 1 C and 1 D. In 1 F it looks like the three young age-groups are represented in equal amounts.

b. Commercial stock.

In inshore waters cod occurred in very small amounts. In the pound net fishery mostly small cod of 1960 and 1961 year-classes were caught.

The two rich year-classes 1956 and 1957 were still of some importance but both of them had decreased. 1958 year-class has only been of some importance in Divisions 1 E and 1 F. Samples from Dohrn Bank and Angmagssalik off East Greenland show a clear dominance of the year-classes 1956, 1957 and 1958 which also were abundant in the Icelandic spawning stock the same year. In samples from September the same year-classes were represented but also the 1961 year-class was found in quantities. This year-class seems to be dominant in the Icelandic stock of cod.

From studies on the relation in the occurrence of the two year-classes 1956 and 1957 and by tagging experiments the Germans found that in 1964, not only a large amount of cod belonging to the year-class 1956 migrated from Southwest Greenland to East Greenland and to Iceland, but also a substantial part of the 1957 year-class did the same.

c. Tagging.

Tagging experiments have been carried out by Denmark, Germany and Iceland. Denmark has tagged in all divisions except 1 A. A number of 3109 was tagged.

Germany has tagged 765 cod off West and East Greenland, and Iceland has tagged 202 off East Greenland.

A total of 917 recaptures of cod tagged in West and East Greenland waters by Denmark was reported in 1964. Of this total, 7 cod tagged off East Greenland and 63 cod tagged off West Greenland were recaptured in Iceland waters.

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From 1959 to 1964, 2932 cod were tagged by Germany. 200 recoveries from these experiments were reported until March 1965. The recaptures off East Greenland and Iceland were more numerous in 1964 than in the preceding years. 49 of the recaptures were reported from East Greenland and Iceland, most from the latter.

5. Redfish.

USSR fished for small redfish with trawl with fine meshed flappers and with mid-water trawl. The experiments were carried out in May and September. South of 64°N. catches up to 400 one-summer old fish were caught with mid-water trawl on depths of 200-300 m.

The Danish studies on growth of redfish in the Godthåb Fjord have been continued in 1964. A total of 5053 small redfish have been caught with shrimp trawl in different months and have been measured.

293 big redfish caught in pound nets were tagged in May in the Godthåb Fjord. 92 recaptures in 1964 of redfish tagged in the years 1960, 62, 63 and 64 have been reported. 86 were caught on the tagging place, 4 on other places in the fjord and 2 were recaptured on the southern offshore banks.

57 redfish taken in 100 m depths with hand line off Southeast Greenland were tagged and released.

6. Atlantic salmon.

The Atlantic salmon occured in 1964 in larger number than in previous years. A number of 37 recaptures of tagged salmon was reported. 13 of these recaptures had been tagged in America and 24 in Europe. A total of 64 recaptures of tagged salmon have been reported since 1956.

7. Other fishes.

Two porbeagle sharks were caught in salmon gill net off West Greenland in 1964. One was taken in the inner part of Ikertoq Fjord (Division 1 B), and the other was caught near Napassoq (Division 1 C).

In coastal waters in Division 1 F haddock and coalfish occurred in larger numbers than usual.

There was also plenty of herring in Division 1 F in August-September.

8. Status of the fisheries.

a. Cod.

The total output of the cod fishery in Subarea 1 in 1964 was, according to statistical tables (Res.Doc. 7), 335,299 tons which is about 76,400 tons less than in 1963. All nations, except Norway and Spain had smaller catches than in 1963. The inshore fishery for cod carried out by the Greenlanders dropped more than 8,000 tons to 22,000 tons. The pound net fishery in spring gave mostly small cod, and the occurrence of large cod in the coastal region was poor. The decrease in the Greenlanders cod fishery may, however, to some degree be ascribed to an increasing interest in the prawn and salmon fisheries which give more money with less work.

The Faroese catch decreased about 11,800 tons to 65,931 tons. Germany caught, in 1964, 94,000 tons or about 42,000 tons less than in 1963. The catch in 1964 was the poorest the German fishing fleet has had in Subarea 1. On the other hand, the German fishing increased

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considerably off East Greenland where 29,350 tons of cod were taken during the spawning season.

Iceland has mostly fished in Divisions 1 D and 1 E. The catches per 100 hours were about the same in both divisions, but in 1 E the output was smaller than in the previous year.

The total French catch was about 35,000 tons or 1,400 tons less than in 1963.

As mentioned above, Norway was one of the two countries with a better fishery in 1964 than in the year before. The Norwegian catch was about 35,000 tons.

Poland made only one trip to Subarea 1 in 1964. Owing to poor occurrence of cod, the trawlers moved to Subarea 2. Only 95 tons were caught in Subarea 1.

Portugal had a decrease of about 10,000 tons from 63,000 tons in 1963 to 53,000 in 1964.

Like in 1963, Spain has only had little fishing activity in Subarea 1. Within a few days, 781 tons of cod were caught which means 265 more than in 1963.

UK fished in Divisions 1 E and 1 F and reached about the same catch as in 1963, namely 26,735. The catch per 100 hours remained steady.

USSR did not carry out commercial fishery in Subarea 1. Russian research vessels operating in the Subarea caught 760 tons of cod.

b. Redfish.

Germany and Iceland were the only nations which fished larger quantities of redfish in Subarea 1 in 1964. The German catch of redfish, however, dropped from 42,804 tons in 1963 to 24,119 tons in 1964. During the last six years the catch per fishing day decreased steadily from 12.5 tons to 3.7 tons. According to the German research report the stock of redfish, since 1960, has diminished to such a degree that the catch of redfish must be considered as a by-catch.

Off East Greenland the German fishery for redfish was important. However, the stock is decreasing and it must be assumed that in future the catches off East Greenland will continue to decrease. The catch of redfish per fishing day off Southeast Greenland dropped from 23.1 tons in 1962 to 15 tons in 1964.

Iceland fished for redfish in all Divisions except 1 A and 1 C. The best fishery was carried out in 1 D but the catch per unit of effort has decreased since 1963. The total Iceland catch in Subarea 1 in 1964 was 1.954 tons. UK, Greenland and Norway caught 523, 222 and 116 tons redfish, respectively.

c. Forecast for the cod fishery.

Denmark, Norway and USSR have given forecasts for the cod fishery in Subarea 1 in the nearest future. All agree that the 1960 year-class will be of importance to the fishery in the coming years. Denmark and USSR consider 1961 as an important year-class.

USSR expects a good fishery in the first two-three years owing to the rich 1960 and 1961 year-classes.

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Norway predicts a further decrease of the year-classes 1957 and 1958. Denmark expects that year-classes older than 1956 will nearly disappear, the 1956 year-class will decrease, but still retaining some importance in 1 F. The year-classes 1957 and 1958 will still occur in 1 D and 1 E. Rather small cod will constitute a high percentage in the catches in 1965.

d. Salmon.

A gill-net fishery for salmon was carried out in inshore water by the Greenlanders. The catch increased from 420 tons in 1963 to about 1,500 tons in 1964.