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Status of Fisheries and Research

carried out in Subarea 2 in 1969

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Reports on research were submitted by the following countries: Canada, Federal Republic of Germany, Poland, Portugal, Spain, UK, USA and USSR.

1. Status of Fisheries

Total catch of all species in 1968 was 482,000 tons and in 1969 was 399,400 tons. This does not include the catches of Denmark (Faroes), Denmark (Greenland), France (Metropolitan), France (St.Pierre et Miquelon), Romania, and non-member countries. If we consider the catch of these countries in 1969 to have amounted to the catch in 1968, then the total catch in Subarea 2 in 1969 will constitute 463,000 tons.

All data of 1969 should be treated as preliminary. Catches by countries in 1969 with the 1968 catch in parenthesis were: Canada (N) 5,365 tons (18,984); Federal Republic of Germany 72,378 tons (55,162):Poland 65,437 tons (73,569); Portugal 66,082 (60,336); Spain 33,152 tons (32,852); USSR 154,437 tons (118,558); UK 2,158 tons (11,747).

Catches by species in 1969 with the 1968 catch in parenthesis were: Cod 370,713 tons (449,342); Haddock 38 tons (4), Redfish 5,924 tons (8,778).

2. Work carried out

a) <u>Canada</u>: The standard section off Seal Island in southern Labrador was occupied in early August. The inshore Labrador Cod landings were sampled in 2H and 2J in July-August.

b) <u>Fed.Rep. Germany</u>: On two cruises of R/V <u>Walther Herwig</u> in February and October 1969, hydrographic observations were carried out. Length and age composition of cod in three divisions of Subarea 2.

c) <u>Poland</u>: In the Div.2H cod were measured and otoliths read for age. The observations included length and age composition at various depths.

Redfish and American plaice were measured in Div.2J and their otoliths read for age. Greenland halibut were measured.

d) <u>Portugal</u>: Samples for length, age and stage of maturity of cod in Div.2J in March and April.

e) <u>Spain</u>: Samples for length, age and sexual maturity of cod in September, October, November and December.

f) USSR: Hydrographic Section across Hamilton Inlet Bank in July and November by R/V <u>Persey III</u>. Length and age composition of cod, redfish and grenadier. Tagging of cod. miles).

g) <u>UK</u>: Sampling plankton with continuous Plankton Recorder (2,172

3. Hydrography

In July the temperature of the cold component of the Labrador Current in the layer 0-200 m was lower than the mean long-term temperature by 0.49° C. In November it continued to be decreased. In summer more cold waters than usual were registered. The temperature of these cold waters was below -1° C.

Deeper layers laid below the cold core, were warmer compared to standard. In comparison with 1968 the temperature of the cold Labrador Current core increased, the near bottom layers became warmer. It might be an indication of the weakening of the Labrador Current intensity.

Stations taken by R/V <u>Walther Herwig</u> in February indicated the strong influence of cold water down to 200 m at the slope of the Hamilton Bank. Bottom temperature in 400 m was still below 3°C. The area of optimal temperatures for cod was therefore very limited and favoured the formation of dense concentrations. In October the cold water component of the Labrador Current was reduced in temperature as well as in volume.

4. Plankton

Continuous plankton recorder survey sampled 2,172 miles of water.

5. <u>Cod</u>

Canadian inshore cod catches taken in the area off Newfoundland and Labrador in 1969 decreased to 4,200 tons, compared to 17,900 tons in 1968 and 27,700 tons in 1967.

Average size of cod taken in inshore waters decreased from 58-59 cm in 1960/64 to 53-56 cm in 1965-69. Cod catch taken by Polish trawlers per 1 hourtrawling in 1969 amounted to 2.99 tons, that was somewhat lower than in 1968 (3.27 tons), but higher than in 1966 (2.65 tons) and in 1967 (2.45 tons).

Observations were carried out on the distribution of cod of different size and age by depths.

Cod was caught at ages 2-19 years, of 24-86 cm long. Larger and older specimens were caught with increase in depth. Portuguese carches in Div. 2J in March-April predominantly consisted of cod 52.6-54.8 cm long (average age - 6.6-6.7 years).

Cod 53.3 cm long dominated in samples taken from the catches of the Spanish trawler <u>Bochorno</u> (average age - 5.7 years).

In the USSR trawler catches, cod aged 6-8 years of the strong 1961-1963 year-classes dominated.

The cold year, 1969, because of its hydrological conditions helped the iormation of denser cod concentrations and higher fishing efficiency. 2,338 cod specimens were tagged in Div. 2J.

Cod 51.2 cm long (average size) at ages 5-8 years dominated in the Fed. Ref. Germany research vessel catches taken in February in Div. 2J in the area of the commercial fishery.

In October the cod 39.8 cm long (average size) at ages 3-4 years were predominant in catches.

6. Redfish

In Div.2J in January, the analysis of age composition of redfish (<u>Sebastes</u> <u>mentella</u>, Travin) caught on the eastern slope of Hamilton Inlet Bank at depths of 480-490 m, was carried out. Fish at ages 7-26 years were landed. Both for males and females the age composition has two peaks: 10-11 years and 20-22 years. Polish catches were predominantly fish 30-36 cm long at ages 9-14 years.

7. Roundnose Grenadier

In Division of the North Labrador in roundnose grenadier concentrations, fish 60-74 cm long at depth of 520-800 m predominated. Specimens of up to 90 cm in length were examined, but all of them were immature.

8. American plaice

In Div.2J, in February, fish 40-52 cm long at ages 14-17 years dominated in samples. In May fish 29-40 cm long at ages 7-10 years were predominant.

9. Greenland Halibut

Fish 45-65 cm long dominated in samples obtained from onboard fishery vessel.

10. Harp Seal

Great displacements of seals from Subarea 4 to Subarea 2 were observed because of the absence of ice in the usual whelping areas in March.