STATUS OF FISHERIES IND RESEARCH IN SUBAREA 2
in $1960^{\circ}$
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Research reports were submitted by the following member countries: Canada, France, Fed.Rep.Germany, Poland, Portugal, U.S.S.R., and U.K.

1. Slatus of the Fisheries

Not all data on catches have been received yet, but according to the data available, the total catch decreased from 377,000 tons in 1965 to 299,000 lons in 1966. However, data on catches in 1966 have not yet been subinitted by non-member countries. It is quite obvious that the total catch will exceed the figure of 299,000 t.ons. If one proceeds from the assumption that the catch taken by non-member countries in 1966 is about the same as in 1965 ( 46,000 tons), then the total catch would be 345,000 tons. This figure should be corrected upon receiving the data from non-member countries.

The following countries reduced their catch in Subarea 2 in 1966: Canada caught 24,000 tons (27,000 tons in 1965) ; Portugal-46,000 tons (73.000 tons in 1965); Spain -49,000 tons (60,000 tons in 1965) ; USSR - 37,000 tons
(67,000 in 1965).

The following countries increased their catch in Subarea 2 in 1966: France caught 31,000 tons (26,000 tons in 1965): Fed.Rep.Germany - 67,000 tons (44,000 tons in 1965) ; Norway - 1200 tons ( 800 tons in 1965): Poland - 32,000 tons (23,000 tons in 1965).

Gatches made by Iceland and J.K. in 1966 were at the same level as in 1965 ( 500 tons and 11,000 tons respectively).

Decrease in the total catch in Subarea 2 was noted for all main species: $\operatorname{cod}-333,000$ tons in 1965 and 288,000 in 1966; redfish - 2?,000 tons in 1965 and 6,000 tons in 1966; flatfish $-7,000$ tons in 1965 and 2,000 tons in 1966: other ground fish - 13,000 tons in 1965 and 2,000 tons in 1966.

Catch in Division 2G went down from 14,000 tons in 1965 to 7,000 tons in 1966. In Division 2H the catch increased from 59,000 tons in 1965 to 66,000 tons in 1966, and in Division 2J it declined from 304,000 tons in 1965 to 224,000 tons in 1966.

All the said figures should also be corrected when data from non-member countries are received.

## 2. Work Carried Out

a) Canada: Bedford Institute of Oceanography carried out oceanographic studies in Labrador and Irminger Sea in March - May 1966. Sampling for size and age in the Canadian inshore fishery was continued. In October $\mathrm{k} / \mathrm{V}$ A.T.Cameron conducted studies on distribution and age and size composition of cod on the Labrador shelf. The icebreaker d'Iberville carried out studies on tagging of young harp seals during the hunting period in order to evaluate the rate of hunting intensity. One hunting vessel conducted work on determination of afe composition for adult hood seals samples.
b) France: In August - September R/V Thalassa carried out oceanographic research from north of the Grand Bank to north of Hopedale Channel. $\mathrm{K} / \mathrm{V}$ Thalassa and Fishing vessels conducted studies on species composition of catches and its distribution by Divisions and by depths.
c) Fed. Rep. Germany: In January $1966 \mathrm{R} / \mathrm{V}$ Walter Herwig studied oceanographic conditions and their influence on fish distribution. Age and size composition of cod in commercial catches was studied.
d) Poland: Studies were carried out on age and size composition of cod, haddock, and flatfish catches taken by fishing trawlers.
e) Portugal: Age and size composition of cod in catches made by fishing trawlers was determined.
f) Spain: Studjes were carried out on age and size composition of cod catches taken by fishing trawlers.
g) U.K.: Size and age composition of fish in commercial catches was studied on shore. Collection of plankton samples was also continued.
h) U.S.S.R.: Research and sonlting vessels conducted oceanographic surveys; size and age composition of catches was studied. Tagging of cod was continued, and experiments were carried out on selectivity of trawl cod-ends with the Polish type chafer.

## 3. Hydrography

Results of surveys carried out aboard the Soviet research and scouting vessels showed that during the first half of 1966 the temperature on the Labrador shelf was considerably higher than long-term mean temperature. Some increase in salinity was also noted and that was obviously due to reduction of inflow of low-salinity waters of the inshore stream of the Labrador current.

Studies on ice distribution in northwest Atlantic carried out by PINRO (USSR) showed that in 1966 the amount of ice was the lowest for the past five years.

The French $R / V$ Thalassa surveyed distribution of temperature and salinity between $47^{\circ} 00^{\prime}$ and $56^{\circ} 30^{\prime} \mathrm{N}$ from the northern part of Grand Bank to the north of Hopedale Channel.

## 4. Plankton

U.K. reported continuation if the Continuous Plankton Recorder Survey, covering 4,400 miles in Subarea 2.

## 5. Cod

Canada continued studies on age and size composition of cod in catches taken by inshore fishery. Studies were also carried out on changes in growth rate of cod in relation to temperature for the period from 1948 to 1966.

France conducted research on distribution of catches by size with regard to depth. In August -September highest catches ( 400 kgs per hour) were taken on the Labrador shelf at depth of 150 to 275 metres.

Fed. Rep. Germany continued studies on age and size composition of cod in catches of conmercial vessels as well as on board $R / V$ Walter Herwig. The studies showed that age composition of cod changed in the following way: in 1965 the 1955, 1956, and 1957 year-classes made up $75.5 \%$ in catches.

In 1966 the said year-classes made up only $44 \%$. As a result, some decline in catches per unit of effort might be expected in the near future.

Poland studied age and size composition of cod catches taken by commercial vessels. Four to eight year old cod were dominant in catches. Growth rate of cod was also studied in different Divisions of Subareas 2 and 3. Results point to the fact that growth rate of cod in Subarea 2 is lower as compared to cod in Subarea 3 .

Portugal studied age and size composition on board the commercial vessels. In March 5 to 8 year old sold and in April-June 8 to 10 year old codrere predominant.

USSR continued studies on age and size composition of catches on board the fishing and research vessel.s and on abundance of young cod. In 1966 5 to 8 year old cod were dominant in catches. About five thousand cod specimens were tagged. Results of tagging allow the preliminary conclusion that cod of Labrador, North Newfoundland Bank and the northern part of the Grand Bank belong to the same stock.

Tagging made by UK in 1962, results of which are summarized in 1966, also allowed the conclusion that cod of Hamilton Inlet Bank in late autumn was part of the Labrador-Newfoundland stock of cod, which is distributed over a wide area of the shelf and coast of Labrador and north-east Newfoundland in spring and summer. Studies were carried out by Canada and USSR on influence of temperature conditions on growth of cod of the Labrador stock. The studies showed that temperature conditions are one of the main reasens for increase or decrease of growth rate of cod. Canadian inshore data indicate an increase in growth of older fish since 1959. This was not evident from USSR studies on samples collected on Hamilton Inlet Bank in spring.

In Subarea 2, experiments were conducted on selectivity of trawl nets with the Polish type chafer. The experiments showed that the Polish type chafing gear yields good results and does not impair selectivity of trawl nets.

## 6. Other Species

Studies on age and size composition of redfish catches were carried out by France, Poland and USSR.

Poland and France also studied distribution of redfish catches depthwise.
Poland carried out study on size and age composition of flatfish catches on Hamilton Inlet Bank.

