RESTRICTED

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 3090
(D.b.72)

ICNAF Summ.Doc. 73/32
(Revised)

ANNUAL MEETING - JUNE 1973

# Status of fisheries and research carried out in Subarea 2 in 1972

by

A.W. May
Fisheries and Marine Service
Environment Canada, Ottawa

See ICNAF Annu. Rept. Vol. 23: 99-100

Reports on research in the area in 1972 were tabled by Canada, Fed.Rep. Germany, Norway, Poland, USSR and UK. The results of specific research studies are contained in Research Document Nos. 73/13, 20, 26, 41, 42, 43, 44, 49, 50, 60, 78, 89, 90, 106 and 113, 120, 121, 122.

## 1. Status of Fisheries

Table 1 lists nominal catches of the major species fished in Subarea 2 for the past five years. The total catch of all species remained low in relation to the peak years of 1968 and 1969. As in the past, cod accounted for the major part of the catch. The flounder catch (combined American plaice, witch flounder and Greenland halibut) has increased from 8,000 tons in 1968 to 19,000 tons in 1972. The high catch of roundnose grenadier in 1971 was not maintained in 1972, but a new fishery was begun for capelin. The catch of 18,000 tons of capelin in 1972 was the first significant catch reported from the Subarea. The capelin catch, as well as most of the catch of other species, was taken in Div. 2J.

Table 1. Nominal catches from Subarea 2, 1968-72 ('000 tons round fresh).

| | 1968 | 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|
| All species | 482 | 490 | 255 | 246 | 219 |
| Cod | 449 | 454 | 224 | 163 | 163 |
| Redfish | 9 | 8 | 11 | 7 | 9 |
| American plaice | + | + | 2 | 2 | 5 |
| Witch flounder | + | + | 5 | 2 | 1 |
| Greenland halibut | 8 | 13 | 6 | 10 | 13 |
| Roundnose grenadier | 7 | 1 | 1 | 57 | 3 |
| Capelin | - | + | - | - | 18 |

a Reported as halibut for 1968

\+ Catch less than 500 tons

Nominal catches of cod by each country fishing in Subarea 2 during 1968-1972 are given in Table 2. The catch in 1972 remained low and at the same level as in 1971. Relative to 1971, increased catches were recorded by USSR and decreased catches by Fed.Rep. Germany, Norway, Portugal and Spain. For other countries, catches varied by only 1,000 or 2,000 tons. The inshore small-boat catches remained at the very low level which has persisted since 1969.

Table 2. Nominal catches of cod in Subarea 2, 1968-72 by country ('000 tons round fresh).

| | 1968 | 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|
| Canada | 18 | 5 | 2 | 3 | 2 |
| France | 39 | 30 | 16 | 6 | 5 |
| Germany, Fed. Rep. | 54 | 72 | 50 | 20 | 10 |
| Norway | 8 | 7 | 3 | 6 | 1 |
| Poland | 70 | 62 | 36 | 17 | 19 |
| Portugal | 60 | 66 | 42 | 34 | 19 |
| Romania | - | 3 | 3 | 1 | 1 |
| Spain | 33 | 33 | 11 | 6 | 2 |
| USSR | 104 | 131 | 50 | 62 | 90 |
| UK | 12 | 2 | 3 | - | 3 |
| USA | - | + | 1 | - | - |
| Non-members | 51 | 49 | 8 | 9 | 11 |
| Total | 449 | 454 | 224 | 163 | 163 |

+ Catch less than 500 tons

2. Work Carried Out

(a) Canada. Biological studies were carried out on inshore cod (mainly length and age observations), and Atlantic salmon (tagging and stock identification studies). Hydrographic observations were made in August.

(b) Fed.Rep. Germany. A groundfish survey and hydrographic observations were carried out in November.

(c) Norway. Research on seal stocks included studies of distribution, tagging, and size, age and reproductive data.

(d) Poland. Commercial catches of cod and redfish were sampled for size and age data.

(e) USSR. Hydrographic observations were made in most months from January to October. Size and age data were collected from cod. Tagging experiments were conducted on cod and Greenland halibut.

(f) UK. The continuous plankton recorder survey was continued, with 4,500 miles sampled in the Subarea in 1972.

3. Hydrography

The waters of Subarea 2 in 1972 were generally colder than in any previous year for which comparable observations are available. The intensity of the Labrador Current was also greater than in previous years. Highest negative anomalies were observed in the surface layers and near bottom. In southern Labrador in July, the volume of water less than -1.5°C. was seven times as great as in the previous coldest year, and cold water extended deeper and farther seaward than previously. In November the whole shelf area in mid-Labrador was covered by water colder than 0°C. From 1970 to 1973 drift ice has appeared in the area about 10 days earlier each year.

4. Plankton

The spring outbreak of phytoplankton was later than normal. Numbers of adult copepods (Calanus) were above average in the oceanic part of the Subarea in spring and summer, but lower than usual in coastal areas. Euphausiids were less abundant than normal. As in 1971, larval redfish abundance was low.

5. Cod

The combination of low stock abundance inshore, and unfavourable temperature conditions, resulted in the absence of a cod fishery in much of the Labrador coastal area. The catch of 1,728 tons was the lowest ever recorded, and was only 6% of the catch taken five years before (in 1967).

Cod of 40-60 cm and ages 5-8 prevailed in USSR trawl catches. The 1967 and

1968 year-classes (ages 4 and 5 in 1972) appeared to be relatively abundant, and the 1969 year-class not very abundant. Preliminary results of USSR tagging experiments indicated an early and rapid southward movement of cod from Div. 2J to Div. 3K, apparently as a result of cooling in the Labrador area. The USSR fishery was greatly hampered by ice conditions in the February-April period. It is expected that these conditions will improve in 1974.

Polish vessels fished the area in January, withdrew in February because of ice, and returned in April and August. Best cod catches per day fished were obtained in January, February and April. Fish of lengths 36-56 cm and ages 5 to 7 predominated. The 1968 year-class was found to be relatively abundant.

Fishing effort and catches by Fed.Rep. Germany were much reduced in 1972 because of ice conditions. Of the cod catch, 70% was taken in January. A groundfish survey in November revealed that cod older than 8 years were scarce. Seventy-two percent of the catch consisted of fish of the 1966, 1967 and 1968 year-classes.

USSR research on cod abundance and recruitment indicates that spawning takes place mainly on the northern parts of the Labrador Shelf, and that the eggs and larvae are carried southward to Div. 3K, from which there is a northward movement of young cod at age 4. The cod in Labrador are characterized by relatively small year-class fluctuations. Good survival of new year-classes in Div. 2J occurred in 1966 to 1968.

Canadian scientists reported on an evaluation of research survey indices of abundance in relation to stock sizes at first entry to the fishery.

An assessment of cod in Div. 2G and 2H indicated a succession of three relatively poor year-classes (1964 to 1966), and maximum sustainable yield for the early 1970's of about 20,000 tons annually.

6. Redfish

Polish sampling in March revealed that redfish of 35–48 cm and 15 to 28 years in age were most numerous in the catches. Soviet investigations on redfish distribution were directed toward analysis of differences in size and age composition relative to depth.

7. Capelin

Capelin were recorded in offshore commercial catches for the first time in 1972. USSR research and scouting vessels found dense concentrations of capelin in Div. 2J in September. Canadian scientists reported on preliminary research on stock identification and stock sizes.