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Status of Fisheries and Research Carried Out in Subarea 3 in 1968

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I. Pertinent Documents

The following research documents contain information relating to Subarea 3.

69/7, 69/11, 69/13, 69/14, 69/16, 69/17, 69/18, 69/19, 69/21, 69/22, 69/23, 69/26, 69/36, 69/38, 69/39, 69/47, 69/56, 69/58, 69/62, 69/76, 69/77, 69/83, 69/84. Documents related solely to salmon are not included.

The latest information regarding the state of the fish stocks is given in the Report of the Assessments Subcommittee.

II. Status of the Fisheries

Table 1 gives the total nominal catches from Subarea 3 of all species, and of cod, haddock, redfish and herring considered separately, for the year 1968 and the four preceding years.

Table 1. Nominal catches from Subarea 3 (thousand metric tons round fresh)

| | 1964 | 1965 | 1966 | 1967 | 1968 |
|-------------|------|------|------|-------|--------|
| All species | 784 | 740 | 748 | 1,103 | 1,157* |
| Cod | 581 | 498 | 499 | 721 | 743* |
| Haddock | 12 | 9 | 10 | 11 | 6* |
| Redfish | 95 | 112 | 79 | 89 | 48* |
| Herring | 3 | 8 | 23 | 79 | 155* |

*Does not include catches by non-member countries

Table 2 gives the nominal catches of selected other species from Subarea 3 for the years 1967 and 1968.

Table 2. Nominal catches of other species taken from Subarea 3 in 1967 and 1968 (metric tons round fresh).

| <u>Species</u> | <u>1967</u> | <u>1968</u> |
|--------------------------|---------------------|---------------------|
| Halibut | 6,762 ^{a)} | 7,422 ^{a)} |
| Greenland halibut | 18,711 | 17,186 |
| American plaice | 59,716 | 55,470 |
| Witch | 8,238 | 4,951 |
| Yellowtail flounder | 2,183 | 5,290 |
| Flounder (not specified) | (a) (b) | (a) (b) |

Table 3 gives the nominal catches in Subarea 3 by species and country for the years 1967 and 1968. The total catch of all species again increased slightly; this was reflected in the catches of many member countries but catches of the United Kingdom, France and Poland decreased. The principal increases were those of Canada (+ 71,000 tons), Spain (+28,000 tons) and Norway (+20,000 tons). The catches of the USSR and Portugal were similar to those taken in 1967.

Cod

In 1968 the cod catch again increased slightly and somewhat larger catches were made by Canada, Spain, Portugal and Norway. The catches of France and the United Kingdom decreased, the latter due to diversion of effort to the Northeast Arctic. Other countries' catches were similar to 1967. Figures for non-members are not yet available.

The heaviest catches were made in the northern part of the subarea, particularly Div.3K and 3L. The fishery was mainly dependent on the good year-classes of 1961, 1962, 1963 and 1964 (Res.Doc.69/14, 69/17, 69/58). Poland reported a winter season's catch per hour's trawling from Div.3K of three times that obtained at the same season in 1967 (Res.Doc.69/58).

Catches declined in Div.3N and 3O in 1968 (Res.Doc.69/84). It appears that the rich cod year-class of 1964 is already being heavily exploited.

Haddock

Catches of haddock have again declined. Canadian (N) landings were reported to be the lowest since 1945. On the Grand Bank there was no evidence of a new year-class. On St. Pierre Bank the 1966 and 1967 year-classes are reported to be a little stronger than in previous years (Res.Doc.69/7, 69/17).

Redfish

Total nominal redfish catch by member countries decreased but figures for non-members are not yet available. The USSR catch remained as in 1967 but catches by Canada and Poland further declined. The USA reported an increase in landings per day fished but the effort was very small (Res.Doc.69/19). Polish surveys indicate that fishing prospects in the immediate future are poor (Res.Doc.69/13).

Herring

The doubling in size of the herring fishery in Subarea 3 in 1968 resulted from the further development of the Canadian purse seine fishery for reduction purposes, mainly in Div.3P. The greater catches were due to increased effort and improved reduction capacity (Res.Doc.69/7).

Halibut and Greenland Halibut

The high nominal catch of halibut again appears to be due to the inclusion of some catches of Greenland halibut by USSR vessels. On this basis total landings of Greenland halibut remained fairly steady, but the Canadian catch decreased while the Polish catch increased and catch per effort in the Canadian gill net fishery declined still further (1966 - 157 kg; 1967 - 68 kg; 1968 - 41 kg). These Greenland halibut nets have taken steadily increasing catches of flounders. (Res.Doc.69/7). Polish fishing yield was better than in 1967 (Res.Doc.69/13).

Table 3

Nominal catches from Subarea 3 in 1967 and 1968 by species and country
/Thousand metric tons round fresh/

| Species | Year | Total | Canada | Denmark | France | Germany | Ice-land | Norway | Poland | Portugal | Spain | USSE | UK | USA | Non mem-bers |
|-------------------|------|--------------------|--------|---------|--------|---------|----------|--------|--------|----------|-------|------|----|-----|--------------|
| Cod | 1967 | 721 ^x | 127 | 15 | 72 | 1 | 0 | 4 | 19 | 114 | 173 | 142 | 43 | - | 9 |
| | 1968 | 743 ^x | 145 | 17 | 63 | - | 0 | 24 | 18 | 119 | 201 | 132 | 24 | - | na |
| Haddock | 1967 | 11 ^x | 2 | 0 | 0 | - | - | - | - | - | 4 | 5 | 0 | - | 0 |
| | 1968 | 6 | 1 | 0 | 0 | - | - | - | - | - | 4 | 1 | 0 | - | na |
| Haddock | 1967 | 89 ^x | 15 | - | 2 | 2 | 0 | - | 9 | - | - | 33 | 0 | 0 | 28 |
| | 1968 | 48 ^x | 8 | - | 1 | - | 0 | - | 6 | - | - | 32 | 0 | 0 | na |
| Greenland Halibut | 1967 | 19 ^x | 17 | - | - | - | - | - | 2 | - | - | - | - | - | - |
| | 1968 | 17 ^x | 13 | - | - | - | - | - | 4 | - | - | - | - | - | na |
| American Halibut | 1967 | 60 ^x | 58 | - | 2 | - | - | - | - | - | - | - | 0 | - | - |
| | 1968 | 55 ^x | 55 | - | 1 | - | - | - | - | - | - | - | 0 | - | na |
| Roundnose Herring | 1967 | 72 ^x | 11 | - | 1 | - | - | - | 5 | - | - | 55 | 1 | - | 0 |
| | 1968 | 77 ^x | 10 | - | 0 | - | - | - | 4 | - | - | 62 | - | - | na |
| Roundnose Herring | 1967 | 16 ^x | - | - | - | - | - | - | - | - | - | 16 | - | - | 0 |
| | 1968 | 24 ^x | - | - | - | - | - | - | - | - | - | 24 | - | - | na |
| Other Roundfish | 1967 | 7 ^x | 2 | 0 | 0 | 0 | 0 | - | - | - | - | 2 | 1 | - | 2 |
| | 1968 | 5 ^x | 2 | - | 0 | - | - | - | - | - | 1 | 1 | 0 | - | na |
| Herring | 1967 | 78 ^x | 78 | - | - | - | - | - | - | - | - | - | - | - | 0 |
| | 1968 | 155 ^x | 155 | - | - | - | - | - | 0 | - | - | - | - | - | na |
| Total all species | 1967 | 1,103 ^x | 325 | 16 | 78 | 1 | 2 | 4 | 35 | 114 | 178 | 265 | 45 | 0 | 40 |
| | 1968 | 1,157 ^x | 396 | 17 | 65 | - | 0 | 24 | 31 | 119 | 206 | 272 | 25 | 0 | na |

^x Does not include catches by non member countries

0 < 500 tons

na Not available

Flounders

The total nominal catch of flounders of all kinds (excluding Greenland halibut) was very similar to that obtained in 1967. 66,441 metric tons were returned as 'flounders (not specified)' of which a large proportion was probably American plaice.

Roundnose grenadier

The USSR further developed this fishery in Div.3K from June to December at depths varying seasonally from 800 to 1,250 metres (Res.Doc.69/17).

Other Species

Landings of capelin by Canada (N), mainly from Subarea 3, were 3,500 tons, approximately the same as in 1967. Squid were extremely scarce in the Newfoundland coastal area with negligible landings in place of the 6,900 tons landed in 1967 (Res.Doc.69/7). The USSR took 12,470 tons of 'other fish unspecified' from Subarea 3 in 1968.

III. Research Work

Research studies in Subarea 3 were reported by Canada, Poland, Portugal, USSR, UK and USA.

Hydrography

Hydrographical studies were made by Canada, Poland, USSR and USA.

The Gulf Stream influence along the southern slopes of the Grand Bank was stronger than usual resulting in near-bottom temperatures in May-June of 8-10°C in comparison with the 6-7°C norm (Res.Doc.69/92). Temperatures in the offshore division of the Labrador Current on the eastern slope of the Grand Bank were, however, somewhat lower than normal (Res.Doc.69/39, 69/62).

Plankton

Few plankton studies were reported. The Continuous Plankton Recorder survey was continued by the United Kingdom, a total of 14,630 miles being sampled in Subarea 3. The spring outburst of phytoplankton was early in Subarea 3. Phytoplankton was abundant on the Grand Banks from February to May with a maximum in March. Calanus was abundant earlier than usual and remained above average for most of the year. Redfish larvae were scarce in recorder collections taken over the American shelf and slope waters (Res.Doc.69/18). There were some Canadian studies of planktonic Foraminifera and of deep water scattering layers. Mid-water trawls worked in these layers at 900-1,100 metres gave catches averaging about 23 kg/hr (Res.Doc.69/7).

Young Fish Studies

The USSR continued the annual trawl survey for young cod (0-3 group) in Subarea 3. The 1965 and 1966 year-classes are weaker than the rich year-class of 1964 but their abundance is described in the USSR Research Report as "high enough ...in...3N, 3O and 3P" (Res.Doc.69/17).

Tagging

The USSR tagged 2,439 cod on Grand Bank in 1968. The return of tagged fish including those released before 1968 in Subareas 2 and 3 confirmed that the 'boundary' between the Labrador-Newfoundland and Southern Grand Bank cod stocks lies between 46° and 47°N.

Selectivity

Selectivity studies in Subarea 3 were reported by the United Kingdom and Canada. The United Kingdom studied the effect of a tight topside chafer on (double codend) on the selectivity of a polypropylene codend and compared codends made of polypropylene multifilament and split fibre twines. The tight topside chafer reduced selectivity for cod by 11 percent; there was no significant difference between the two forms of polypropylene (Res.Doc.69/36).

Canada carried out gill net mesh selection experiments on Greenland halibut using 6, 7 and 8 inch mesh monofilament gill nets. An increase in mesh size yields smaller numbers of fish but an increase in weight caught per unit of effort (Res.Doc.69/7).

Atlantic Salmon

No attempt has been made to summarize the information derived from Subarea 3 relating to Atlantic salmon. The latest report of the Joint Working Party on North Atlantic Salmon is to be found in Res.Doc.69/33.

Pink Salmon

The 5,334 pink salmon that returned to North Harbour River, Newfoundland, were allowed to spawn naturally in 1967. Egg deposition was estimated to be 4,400,000.

From 5.9 million eggs from British Columbia planted in North Harbour River in November 1966, 1,353 fish returned in 1968 between 6 August and 4 October. From the commercial fishery an additional 933 fish were recorded.