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UK Research Report, 1973

SUBAREAS 1-4

A. Status of the Fisheries

UK fishing effort in 1973 was 15 400 hours, 8 600 lower than in 1972. Freezers accounted for 14 900 hours of the total.

Total catch of cod was 4 500 tons, a drop of 6 400 compared with 1972. 80% was from Subarea 3, 11% from Subarea 2 and 9% from Subarea 1.

HOURS FISHING, NUMBER OF ARRIVALS AND LANDINGS OF COD FROM THE NORTH-WEST ATLANTIC

|      | <u>ICNAF Subareas</u>                           |          |          |          | <u>Total</u> |
|------|---|----------|----------|----------|--------------|
|      | <u>1</u>  | <u>2</u> | <u>3</u> | <u>4</u> |              |
|      | <u>Landings (statute tons, gutted, head on)</u> |          |          |          |              |
| 1972 | 694   | 2 555    | 6 687    | 968      | 10 904       |
| 1973 | 404   | 512      | 3 616    | -        | 4 532        |
|      | <u>Hours fished</u>                             |          |          |          |              |
| 1972 | 1 843   | 6 921    | 13 908   | 1 399    | 24 071       |
| 1973 | 601   | 1 544    | 13 280   | -        | 15 425       |
|      | <u>Number of arrivals</u>                       |          |          |          |              |
| 1972 | 17  | 23       | 35       | 10       | 85           |
| 1973 | 9   | 14       | 22       | -        | 45           |

D. J. Garrod  
Fisheries Laboratory  
Lowestoft.

B. Special Research Studies

I Environmental Studies

Hydrographic studies

Subarea 1

Between 6 and 12 November 1973 RV CIROLANA worked four hydrographic sections off the west coast of Greenland at Cape Desolation, Noname Bank, Danas Bank and Fyllas Bank. The data are being co-ordinated with those of the FRG's RV WALTHER HERWIG by Dr. Frede Hermann.

H. W. Hill  
Fisheries Laboratory  
Lowestoft.

II Biological Studies

Groundfish survey

Subarea 1

The groundfish survey of West Greenland was repeated in November 1973. Weather conditions limited the work done to 18 trawling stations and the four standard hydrographic sections. The fishing was patchy and this showed up the limitations of this sort of survey in an area where trawling is restricted by the nature of the ground. Comparison of the 1972 and 1973 surveys is more or less meaningless and groundfish survey work in this area will be discontinued.

As in 1972 the 1968 year-class of cod predominated in the catches.

D. J. Garrod  
Fisheries Laboratory  
Lowestoft.

Salmon

No tagging of salmon was carried out at West Greenland during 1973, but work progressed on the computer analysis of measurements of fish made during the 1972 International Salmon Tagging Experiment.

Up to March 1974, a total of 205 salmon from the total of 2364 tagged during the experiment had been recaptured, 157 being taken at West Greenland, 11 in Canada and 37 in Europe.

Recaptures at West Greenland of smolts tagged during 1972 in Scotland, and England and Wales, numbered 163. Of these, 137 were tagged in Scotland and 7 in England and Wales as wild smolts, and 2 in Scotland and 17 in England and Wales as hatchery smolts.

Smolts were again tagged during the spring of 1972. In England and Wales 2680 wild and 4826 hatchery smolts were tagged, and in Scotland 26,949 wild and 7500 hatchery smolts. In addition, 275 hatchery smolts were tagged in Northern Ireland, making a total of 41,930 smolts tagged in 1973.

A.V. Holden  
Freshwater Fisheries Laboratory  
Faskally  
Pitlochry

SUBAREAS 1-5

Special Research Studies

Plankton Studies

The survey with Continuous Plankton Recorders operated from the Oceanographic Laboratory of the Institute for Marine Environmental Research, Edinburgh was continued in 1973 on the same basis as in other years. The survey was financed by the UK Natural Environment Research Council.

Recorders are towed at a depth of 10 metres, at monthly intervals, along standard routes by cutters of the US Coast Guard and by merchant ships from Denmark, Iceland and the United Kingdom. Recorders towed by the Coast Guard Cutters were maintained and managed by the US National Marine Fisheries Service at Narragansett. During 1973 recorders sampled for 1 417 miles in Subarea 1, 2 253 miles in Subarea 2, 8 494 miles in Subarea 3, 2 173 miles in Subarea 4 and 421 miles in Subarea 5. This sampling forms part of the laboratory's standard survey of the North Atlantic and the North Sea.

The data processing of the results from the survey is fully automated. The survey area is divided into statistical rectangles, each 2° of longitude by 1° of latitude, which are then grouped into a system of standard areas (see Annual Report of the Scottish Marine Biological Association for 1970-71) and also the ICNAF Subareas. The monthly distributions of all species, or groups of species, are plotted as mean numbers per statistical rectangle, standard area and ICNAF Subarea. At the end of every year the annual and seasonal fluctuations in abundance of each entity are calculated for each standard area in the North Sea and north-eastern Atlantic for the period 1948 onwards, and for each standard area and ICNAF Subarea in the western Atlantic from 1962 onwards; routine statistical analyses, such as Principal Component Analysis, are then carried out. Further details may be obtained on application to the Director, Institute for Marine Environmental Research, Oceanographic Laboratory, 78 Craighall Road, Edinburgh EH6 4RQ.

A report of the plankton for 1973 has been submitted as a separate document to the present meeting.

G. A. Robinson  
Institute for Marine Environmental  
Research  
Oceanographic Laboratory  
78 Craighall Road  
Edinburgh EH6 4RQ

