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UK Research Report, 1975

by

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A. Status of the Fisheries

UK fishing effort in 1975 was 4,837 hours compared with 24,589 hours in 1974. 85% of the fishing effort in 1975 was in Subarea 3.

Total landings of cod showed a similar decline being 959 tons (whole weight), compared with 5,673 tons in 1974.

Hours fishing, number of arrivals, and landings of cod from the Northwest Atlantic¹

	ICNAF Subareas					Total
	1	2	3	4	5	
Landings of cod (metric tons, whole weight)						
1974	1,281	427	3,782	122	61	5,673
1975	160	75	744	-	-	959
Hours fished						
1974	2,535	866	17,933	727	528	24,589
1975	431	278	4,128	-	-	4,837
Numbers of arrivals						
1974	23	14	40	7	6	90
1975	6	4	9	-	-	19

¹ Provisional figures

B. Special Research Studies

I. Environmental studies

(a) Hydrographic studies

Hydrographic studies in 1975 were limited to a single cruise by R/V *Cirrolana* from 5-30 July. Caesium 137 surface samples and trace metal samples for a trace metal baseline study were taken at unit degree intervals across the Atlantic along the ship's track from UK to Newfoundland, and return, as well as on the Flemish Cap, Sable, Banquereau, St. Pierre, Green, Grand, Rittu and Hamilton Bank fishing grounds during trawling surveys to obtain cod tissue specimens for biochemical and genetic analyses of races. Temperature and salinity observations were also made at most of these stations.

II. Biological studies

(a) Salmon

Although no meeting of the ICES/ICNAF Joint Working Party on North Atlantic Salmon took place in 1975, members of the MAFF and DAFS Freshwater Fisheries Laboratory staff were involved in the preparation of detailed scientific reports on aspects of the international tagging experiment at West Greenland in 1972 and on other activities of the Working Party, for publication in a special volume of the ICES Rapports et Procès Verbaux. Smolt tagging experiments were also continued in English and Scottish river systems, to

provide further information on the origin of salmon in the West Greenland stock.

(b) Continuous Plankton Recorder Survey in the ICNAF Area in 1975

The survey with Continuous Plankton Recorders operated from the Oceanographic Laboratory of the Institute for Marine Environmental Research, Edinburgh, was continued in 1975 on the same basis as in other years. The survey is financed partly by the Natural Environment Research Council and is commissioned in part by the Ministry of Agriculture, Fisheries and Food of the United Kingdom.

Recorders are towed at a depth of 10 m, at monthly intervals, along standard routes by merchant ships from Denmark, Iceland, and the United Kingdom. During 1975, Recorders sampled for 1,308 miles in Subarea 1, 1,133 miles in Subarea 2, 3,667 miles in Subarea 3, and 332 miles in Subarea 4. This sampling forms part of the laboratory's standard survey of the North Atlantic and North Sea. Sampling in the western Atlantic was reduced in the first six months of 1975 owing to changes in shipping schedules.

The data processing of the results from the survey is fully automated (Colebrook, *Bull. mar. Ecol.*, 8, 123-142). The survey area is divided into statistical rectangles, each of 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 northeastern 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 of Marine Environmental Research, Oceanographic Laboratory, 78 Craighall Road, Edinburgh EH6 4RQ.

A report of the plankton for 1975 is being submitted to the Annual Meeting of ICNAF in June 1976.