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UK RESEARCH REPORT: 1970

SUBAREAS 1-3

A. Status of the Fisheries

Fishing effort in the north-west Atlantic remained small in 1970 - 4 600 hours compared with 4 300 in 1969 - owing to the continued good fishing in the north-east Arctic. Wet-fishers voyaged there at the end of the year and accounted for about one-quarter of the total effort. Most of the stern freezer-trawlers were in the area at the beginning of the year.

Total catches of cod amounted to only 5 300 tons, 800 tons more than in 1969. Over half of the catch came from Subarea 1, about 40 per cent from Subarea 2 and the remainder from Subarea 3. The amount of fishing was again too small to permit valid comparison with earlier years.

Sampling of commercial catches from the ICNAF area was slightly improved, especially in respect of the end-of-year fishing at the west coast of Greenland (Subarea 1).

HOURS FISHING, NUMBER OF ARRIVALS AND LANDINGS OF COD

North-east Arctic and north-west Atlantic

	ICNAF Subareas			Total
	1	2	3	
	Landings (statute tons)			
1969	444	1 746	2 307	4 497
1970	2 760 (1 670)*	2 107	424	5 291 (1 670)*
	Hours fished			
1969	338	1 335	2 618	4 291
1970	2 034 (1 108)*	709	1 897	4 640 (1 108)*
	Number of arrivals			
1969	3	6	8	
1970	14 (10)*	5	5	

*Wet-fishers included in total.

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B. Special Research Studies

I Environmental: The survey with Continuous Plankton Recorders, operated from the Oceanographic Laboratory, Edinburgh, continued in 1970 on the same basis as in other years. It was financed by the British Natural Environment Research Council.

Recorders are towed at a depth of 10 metres, at monthly intervals, along standard routes by cutters of the US Coastguard and merchant ships from Denmark, Iceland and the United Kingdom. During 1970, recorders sampled for 1 370 miles in Subarea 1, 3 420 in Subarea 2 and 16 915 in Subarea 3. This sampling forms part of the laboratory's standard survey of the North Atlantic Ocean and the North Sea. Further details may be obtained on application to the Director, Oceanographic Laboratory, Craighall Road, Edinburgh EH6 4RQ.

The spring outbreak of phytoplankton was below average in the oceanic region of Subarea 3 but diatoms were abundant over the Grand Banks in April and May.

Numbers of copepods were close to the long-term mean (1962-69) in the northern oceanic Subarea 2; they were above average during the first half of the year in both the oceanic and coastal parts of Subarea 3 and below average from July to November.

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II Biological: UK scientists continued their studies of the West Greenland salmon fishery in 1970 and, during the period late August to mid-November, five scientists took part in the investigations at Greenland. The main items in the programme were a comparison of drift-netting and long-lining as a method of catching salmon in West Greenland (carried out in collaboration with Canada), investigations of the viability of salmon caught and tagged from gill nets and further serological studies on salmon blood.

The results of the comparative tests of methods of catching salmon indicated that more fish were caught by drift-netting than by long-lining and, though the proportion of taggable fish was higher in the long-line catch, it did not compensate for the larger numbers of fish caught by drift nets. It would therefore seem that drift-netting should be adopted as the means of catching salmon in the international tagging experiment which is now being considered. In the gill-net experiment, the live fish caught were placed in keep nets for periods of at least 24 hours. Some of the fish were tagged before impoundment, others were impounded untagged. The main result obtained was that the period of impoundment provided an indication of the chances of survival in that, if salmon in various physical states were impounded for 24 hours or more, at the end of the period they were either very active or dead.

Two of the 43 salmon tagged at West Greenland from long lines during 1969 have been recaptured, one locally (at Ikertoq, within 40 n.m. of the tagging site) and one from the River Wye (England). No recaptures have yet been recorded from the fish tagged from the gill-net catches in 1969.

As in previous years, a number of recaptures have been recorded of fish tagged as smolts in UK rivers in 1969 but one recapture at West Greenland in 1970 deserves special mention. This was a salmon which was tagged near the Faroes at the beginning of April 1970 and caught at Frederickshåb some six months later.

Smolts were again tagged in home waters during the spring of 1970. In England and Wales, a total of 11 813 (7 320 wild and 4 493 hatchery-reared) was tagged and in Scotland a total of 39 907 (32 071 wild and 7 836 hatchery-reared).

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SUBAREAS 4 AND 5

A. Status of the Fisheries

There was no UK fishery in Subareas 4 and 5 in 1970.

B. Special Research Studies

I Environmental: The Continuous Plankton Recorder survey was also operated in Subareas 4 and 5 in 1970 on the same basis as in other years (see under Subareas 1-3). Recorders sampled for 4 385 miles in Subarea 4 and for 660 in Subarea 5.

Diatoms were abundant in the coastal regions of the two subareas in April but numbers were low for the remainder of the year. Copepods were less abundant than usual except in August and November in Subareas 4 and 5. Young stages of the populations of Sebastes spp. found in American shelf and slope waters were scarce everywhere.

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