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Status of fisheries and research carried out in Subarea 2 in 1975

by

T K Pitt

Environment Canada
Fisheries and Marine Service
Biological Station
St John's, Newfoundland

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Reports on research and status of the fishery by various countries are contained in Summary Documents 76/VI/12 (UK), 15 (Spain), 17 (Poland), 18 (GDR), 19 (Norway), 20 (USSR), 23 (Canada), and 31 (FRG). Information on research studies in the Subarea are contained in Research Documents 76/VI/5, 6, 20, 23, 27, 28, 54, 62, 70, 72, 88, 100, 109, 112; also Summary Documents 76/VI/13 (Cod Ageing Workshop Report). Working papers were also produced at the Assessments Sub-committee meeting and pertinent to research in the Subarea.

1. Status of Fisheries

Nominal catches of the major species 1971-75 are listed in Table 1. There was an overall increase of about 12% in the total catch in 1975 as compared to 1974. A decline of about 28% in the cod catch was offset by increases in capelin landings for 85,000 to 145,000 tons (+71%), and for redfish from 6,000 to 14,000 tons. Flatfish landings declined slightly and roundnose grenadier landings doubled from 6,000 tons in 1974 to 12,000 in 1975.

Decreases in the catches of all the major cod fishing countries except Canda and the USSR were reported (Table 2). The Polish catch for cod declined from about 24,000 tons to 9,000 and slightly smaller decreases were reported by the Federal Republic of Germany and the German Democratic Republic. As in 1974, nearly 90% of the catches came from Div 2J.

2. Work Carried Out

(a) Canada. Monitoring of the coastal fishery was continued in 1975. Catches were small. Samples for age and length compositon of cod were taken from the trap and gill net fishery. Cod samples were also taken from the otter trawler fishery in Div 2J. Research vessel activity in the Subarea consisted of one groundfish survey, one acoustic survey for capelin and an exploratory cruise for shrimp in the Hawke Channel area. Programs of commercial sampling of Atlantic salmon and investigation on Arctic char in Northern Labrador were continued. Hydrographic observations were carried out during August.

(b) Federal Republic of Germany. The autumn groundfish research vessel cruise series was continued in 1975, using the random stratified method of fishing station selection. Commercial catches were also sampled. All finfish caught were at least sampled for length frequencies. Cod, redfish and Greenland halibut were also sampled for age composition. Hydrographic data were also collected.

(c) German Democratic Republic. Biological sampling of cod, redfish and Greenland halibut was carried out. In Div. 2J some hydrographic work was also done.

(d) Norway. Research on harp and hooded seals continued also investigation on distribution and abundance of capelin.

(e) Poland. Commercial catches of cod, redfish, Greenland halibut and plaice were sampled for lengths and ages.

(f) USSR. Hydrographic observations were made at various times throughout the year. Samples of cod and roundnose grenadier were obtained for lengths, ages and other hydrological studies. Cod and Greenland halibut were tagged primarily in Div. 2J.

3. Research Results Reported

As indicated, most countries with significant fisheries in Subarea 2 in 1975 conducted sampling studies of their commercial catches. These data together with other pertinent information were used in the assessment of the various stocks. The latter is summarized in the report of the Assessment Subcommittee

(Summ.Doc. 76/VI/22) and in the Report of the Scientific Advisers to Panel 2. New information is summarized below.

(a) Hydrography. Although temperatures during the first half of the year were below norm, autumn temperatures in 1975, both at the surface and bottom, were higher than in 1974, with bottom temperatures on Hamilton Inlet Bank during the autumn of 1975 about 1^{o} C higher than in the previous year according to FRG research vessel records. Solar heat at the surface layers was more intense than in 1974 but was not as strong as in 1973.

(b) Cod. Because of improved ice conditions, the fishery improved somewhat in the winter and spring of 1975. In spite of this, there was an overall 28% decrease in the catch. Improved catch rates were evident in Div.2GH as compared to the previous 3 years with catch rates by the FRG being more than double that of 1974. The improvement in Div. 2GH was more than offset by the apparent decline in abundance in Div.2J. USSR research data indicated a reduction in cod abundance especially in Div.2J mainly because of low abundance of the 1969-72 year-classes. Preliminary estimates by the latter country indicate that the 1973 and 1974 year-classes were average but will not, at any rate, be recruited to the fishery until 1978-79. Thus, the good year-classes which contributed to high catches in the 1960's are being replaced by the poor 1969-72 year-class and abundance of cod in the Subarea is therefore relatively low and will remain so until there is a marked improvement in the recruitment pattern.

(c) Redfish. Polish sampling of commercial redfish indicate that January catches were composed of 20-61 cm specimens with a mean length of 29.8 cm. In February the redfish were somewhat smaller, 20-51 cm (27.3 average) FRG redfish age frequencies from survey cruises indicated peaks at 7, 11 and 14 years. A greater proportion of small fish were encountered in the shallow strata.

(d) Capelin. Biological data on capelin feeding in Div.2J (Res.Doc.76/VI/20) and information on age distribution, sex ratios and sexual maturity was presented (Res.Doc.76/VI/62). The latter document indicated that in Div.2J age-group 2 of both males (28%) and females (60%) predominated the Canadian research vessel

catches during the autumn of 1975. Most of these fish would spawn in the spring of 1976.

(e) Roundnose grenadier. Most of the relevant data on this species are summarized in the 1976 Assessments Subcommittee Report (Summ.Doc. 76/VI/22). However, additonal data from the USSR documented the extent of the by-catch of other commercial species in the granadier fishery. Greenland halibut was the most frequent by-catch species, but redfish, and to a minor extent cod, were also recorded. These by-catches ranged from 1.8 to 29.1% of the grenadier catch in Subarea 2 (Res Doc 76/VI/112).

(f) Greenland halibut. Polish length frequencies of Greenland halibut ranged from 32-98 cm; these were somewhat similar to those recorded by GDR at 24-82 cm.

Table 1 Nominal Catches from Subarea 2 1971-75 ('000 tons)

	1971	1972	1973	1974	1975
All Species	246	220	159	255	286
Cod	166	163	58	125	89
Redfish	7	10	11	6	14
American plaice	2	5	2	1	1
Witch flounder	2	1	1	4	2
Greenland halibut	10	13	14	16	11
Roundnose grenadier	57	3	7	6	12
Capelin	-	18	60	85	145
Others	5	7	6	12	12

Table 2 Nominal Catches of Cod in Subarea 2, 1971-75 by Country ('000 tons)

	1971	1972	1973	1974	1975
Canada	3	2	5	2	3
Demark	-	-	+	1	1
France	6	5	1	1	1
FRG	20	10	7	29	20
GDR	9	11	2	19	12
Norway	6	1	1	1	+
Poland	17	19	3	24	9
Portugal	34	20	13	21	10
Romania	1	1	+	-	?
Spain	6	2	1	4	1
USSR	62	90	25	24	32
UK	-	3	1	+	+
USA	-	-	-	-	-
TOTAL	163	163	58	125	90

+ Catch less than 500 tons