

Northwest Atlantic



Fisheries Organization

Serial No. N2099

NAFO SCS Doc. 92/18

SCIENTIFIC COUNCIL MEETING - JUNE 1992

Japanese Research Report for 1991

by

K. Yokawa

National Research Institute of Far Seas Fisheries
7-1, Orido 5 chome, Shimizu-shi, Shizuoka, 424 Japan

The total nominal catch by Japanese trawlers and squid jiggers from the NAFO waters decreased (35%) from 12,000 tons in 1990 to 7,900 tons in 1991 (Tables 1 and 2). This is mainly due to decrease in the catch of redfish in Divisions 3K, 3L, 3M and 3O, capelin in Division 3N and *Illex* in Subarea 4. Especially the catch of capelin fell to none in 1991, while 2,050 tons in 1990. The catch of *Illex* from trawl and jigging fisheries decreased (81%) from 1320 tons in 1990 to 250 tons in 1991.

The number of Japanese trawlers operated in the NAFO waters was six in 1991 same as in 1990. They were two 3,000, one 500 and three 300 GRT class stern trawlers. Total fishing effort increased (14%) from 9,700 hours fished in 1990 to 11,000 hours in 1991. The increase occurred mainly in Divisions 0B, 2G and 3L.

The number of Japanese squid jiggers operated in the NAFO waters increased from two in 1990 to five in 1991. They all belonged to the 300 GRT class, and operated in Divisions 4W and 4X. The days fished increased from 118 days in 1990 to 173 days in 1991.

The fishing grounds of Japanese trawlers were located on the continental slopes off Baffin Island(0B), West Greenland (1A-D), Labrador (2GHJ), Newfoundland (3K-3O), Flemish Cap (3M) and Nova Scotia (4VW). Japanese trawlers moved among these fishing grounds, as done in the previous years.

The fishing grounds of Japanese squid jiggers were located on the continental shelf off Nova Scotia (4VW). They operated very seasonally in July and August.

I. Subarea 0

A. Status of the Fisheries

The directed fishery for Greenland halibut was carried out at depths of 850-1,200 m in Division 0B during September-November. The Greenland halibut catch was in-

creased remarkably (about 6 times) from 110 tons in 1990 to 680 tons in 1991. And hours fished increased to 1450 hours.

II. Subarea 1

A. Status of the Fisheries

Exploratory fishings were carried out by R/V *Shinkai Maru* mainly at depths around 1,000 m in Divisions 1C and 1D in September-October. Most of the catch were Greenland halibut. No other commercial vessel operated in this area. The mesh size of the cod-end used was 140 mm.

B. Special Research Studies

A Japan and Greenland Joint Research on Groundfish off Greenland

Under an agreement between the Japan Marine Fishery Resource Research Center (JAMARC) and the Greenland Trawling Company of the Greenland Home Rule (GTC), two types of trawl surveys, stratified bottom trawl survey and exploratory survey for the deepwater and pelagic resources, have been continued off Greenland since 1987 by using R/V *Shinkai Maru*. In 1991, stratified bottom trawl surveys were carried out off West Greenland in August, September and November.

III. Subarea 2

A. Status of the Fisheries

The directed fishery for Greenland halibut was carried out at depths of 900-1,300 m in Divisions 2GH during August-December. The Greenland halibut catch decreased (9%) from 1,600 tons in 1990 to 1,400 tons in 1991. The mesh sizes of the cod-ends used were 130-142 mm.

IV. Subarea 3

A. Status of the Fisheries

The redfish-directed fishery was carried out between 400-700 m in Divisions 3K, 3L, 3M and 3O all the year round. The total redfish catch decreased (53%) from 3,900 tons in 1989 to 1,800 tons in 1991. Redfish were taken mainly in Divisions 3M and 3O as in the previous year. The American plaice-directed fishery was carried out at depths of 100-550 m in Divisions 3L and 3M. The American plaice catch attained to 500 tons. Some fishing operations directed for cod in Division 3N at depths of 60-350 m. The catch of capelin fell into none.

V. Subarea 4

A. Status of the Fisheries

The redfish-directed fishery was carried out in Division 4V in August and November at depths around 400 m. The total redfish catch was 500 tons in 1991 as in 1990. In

Division 4W, the silver hake-directed fishery was carried out in May and the catch increased (about 2.5 times) from 320 tons in 1990 to 780 tons in 1991. The *Illex* catch by trawlers decreased significantly (85%) from 280 tons in 1990 to 40 tons in 1991. The mesh sizes of the cod-ends used were 65 mm for silver hake in Division 4W and 130-142 mm for red fish.

Five Japanese squid jiggers operated in Divisions 4WX in July-August. The catch of *Illex* decreased rapidly (80%) from 1,100 tons to 220 tons in 1991 (Table 2). The number of days fished increased from 118 days in 1990 to 173 days in 1991. Most of catch (97%) were obtained in Division 4X. The fishing activity began in July due to the fishing plan in the other waters. The CPUE in 1991 was about 1 tons per day, which was far less than CPUE in 1990 (9 tons per day).

Table 1. Fishing efforts and catches (tons) by species of Japanese trawl fishery in each NAFO Division in 1990 and 1991.

Year	1990																				Total			
	OB	1A	1B	1C	1D	1E	1F	2G	2H	2J	3K	3L	3M	3N	3O	4Vn	4Vs	4W	4X	5Ze		5Zv	6A	6B
Hours fished	83	4	9	586	411	-	-	1,555	333	8	211	255	3,555	1,053	766	19	291	464	71	-	-	-	-	8,702
Days fished	7	2	4	57	45	-	-	104	26	1	26	21	282	91	61	2	24	38	8	-	-	-	-	798
Total catch	124	1	2	705	481	-	-	1,455	287	2	262	175	2,480	2,433	1,438	18	488	565	34	-	-	-	-	10,968
Cod	-	-	-	0	0	-	-	-	0	0	8	1	24	350	1	-	3	0	0	-	-	-	-	389
Redfish	-	0	0	1	0	-	-	0	0	1	238	151	2,081	4,140	-	18	475	8	-	-	-	-	-	4,382
Silver hake	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	1	313	1	-	-	-	-	315
Greenland halibut	114	1	2	619	387	-	-	1,346	244	0	9	8	55	-	1	-	0	-	-	-	-	-	-	2,785
Argentine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	11	0	1	-	-	-	-	15
Capelin	-	-	-	-	-	-	-	-	-	-	-	-	-	2,054	-	-	-	-	-	-	-	-	-	2,054
Squid- <i>Illex</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	0	228	28	-	-	-	-	255
Others	10	0	0	85	114	-	-	109	43	0	6	15	330	25	24	0	8	17	8	-	-	-	-	791

Year	1991																				Total			
	OB	1A	1B	1C	1D	1E	1F	2G	2H	2J	3K	3L	3M	3N	3O	4Vn	4Vs	4W	4X	5Ze		5Zv	6A	6B
Hours fished	1453	21	82	828	108	-	-	2,375	128	12	212	1,858	2,952	169	317	-	538	197	-	-	-	-	-	11,030
Days fished	87	9	24	55	13	-	-	148	12	1	18	130	227	13	19	-	31	15	-	-	-	-	-	802
Total catch	775	4	10	653	126	-	-	1,575	46	3	85	487	2,086	104	236	-	587	884	-	-	-	-	-	7,648
Cod	-	0	0	0	0	-	-	-	-	-	-	4	54	78	0	-	4	0	-	-	-	-	-	140
Redfish	-	0	1	0	0	-	-	1	1	2	63	63	1,432	5	228	-	500	0	-	-	-	-	-	2,314
Silver hake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	781	-	-	-	-	-	781
Greenland halibut	678	1	3	567	105	-	-	1,400	41	0	8	302	128	-	3	-	1	-	-	-	-	-	-	3,239
Argentine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	18	-	-	-	-	-	-	20
Capelin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Squid- <i>Illex</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	38
Others	97	3	8	86	21	-	-	174	4	0	14	98	483	21	5	-	43	85	-	-	-	-	-	1,117

Table 2. *Illex* catch and effort by Japanese squid-jiging fishery in each NAFO division in 1990 and 1991.

Year	1990						
Month	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days fished	11	47	58	2	-	-	118
4Vs	-	30	-	-	-	-	30
4W	95	71	0	-	-	-	165
4X	0	241	627	5	-	-	873
Total	95	342	627	5	-	-	1,068

Year	1991						
Month	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days fished	34	139					173
4W	5	1	-	-	-	-	6
4X	55	156	-	-	-	-	210
Total	59	157	-	-	-	-	216