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Efficiency of sampling the major fisheries of the Northwest Atlantic in 1975

by

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Introduction

A paper prepared by the ICNAF Secretariat in 1972 contained information on the sampling efficiency for some of the major fisheries in the Northwest Atlantic for the years 1969 and 1970 (Res.Doc. 72/63). Of the eight species covered in that analysis, only two could be considered as having been adequately sampled in the light of the minimum sampling requirement of 200 fish measured for each 1,000 tons caught. A similar study conducted for 1973 sampling data (Summ.Doc. 75/11) indicated that some improvement had occurred between 1969-70 and 1973, but, of the 55 stocks dealt with, 20 were noted as requiring special attention. A somewhat more comprehensive survey of 1974 sampling data for 59 stocks (Summ.Doc. 76/VI/33) indicated no improvement, as only 60% of the stocks were considered to have been adequately sampled for length and less than 50% for age, the major deficiency being the consistent lack of data for some countries with significant fisheries on the stocks involved. The present review utilizes sampling data and nominal catches for 1975.

Materials

At the 1975 Annual Meeting, STACRES reviewed the minimum sampling requirement and proposed that each country should sample its commercial fisheries at the rate of one length sample per 1,000 tons of a species caught in each quarter of the year with a corresponding age sample being one fish for each centimeter length group in the length frequency sample. Taking one length sample per 1,000 tons of fish as the baseline, the present analysis utilizes the nominal catch statistics of ICNAF *Statistical Bulletin* Vol. 25 for 1975 and all commercial sampling data reported to the Secretariat for that year. Pure research vessel data were not generally used, except in cases where it appeared obvious that the samples were taken with commercial-sized gear and seemed to be associated with significant commercial fisheries.

Although sampling data are listed in Table 1 for 22 species as reported by 14 countries, the data for 18 species covering 54 stocks are reviewed in Table 2. The % values in parentheses represent the percentage of the total catch covered by the catches listed for each stock. The "sampling efficiency" is defined as the ratio of the "number of length samples" to the "nominal catch in 1,000-ton units". When sampling data were reported for cases where the nominal catch was less than 500 tons, the sampling efficiency is simply the number of samples reported. Asterisks in the right portion of Table 2 indicate the absence of sampling data. Efficiency values less than 1.0 indicate that sampling for length was below the minimum required level, whereas values greater than 1.0 indicate the extent by which the minimum level was exceeded. No attempt is made in this review to assess the adequacy of sampling for age.

Results

Table 3 contains a summary of the information presented in Table 2 for the

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finfish stocks by area and country. Each entry in the table represents the nominal catch to the nearest 1,000 tons (on annual basis) and the sampling efficiency as defined above. Asterisks following the nominal catch indicate that no sampling data were reported to the Secretariat. Nominal catches less than 1,000 tons are not generally recorded; however, when sampling data were available, nominal catches less than 500 tons are indicated by "+".

The following breakdown of the finfish stocks by sampling efficiency factors reflects in a very general way the adequacy (or inadequacy) of sampling for length in 1975:

Species	Number of stocks with sampling efficiency	
	<1.0	>1.0
Cod	9	2
Haddock	-	3
Redfish	5	2
Silver hake	1	2
Red hake	-	2
Pollock	-	1
American plaice	2	2
Witch	1	4
Yellowtail	-	3
Greenland halibut	2	-
Roundnose grenadier	2	-
Herring	1	2
Mackerel	-	2
Argentine	-	1
Capelin	2	1
Total	25	27

On the basis of the number of length samples reported (Table 2), the three squid stocks could possibly be considered as adequately sampled, but several countries did not provide a breakdown of their nominal catches by *Loligo* and *Illex* in Subarea 5 and Statistical Area 6. For some of the stocks with sampling efficiency factors greater than 1.0, sampling cannot be considered adequate when some countries with significant catches consistently report no sampling data; notable examples of this are American plaice in 2+3K and witch in 2J+3KL and 4VWX.

Conclusions

The sampling data available for 52 stocks summarized in the foregoing table indicate that only about one-half of the stocks were adequately sampled for length in 1975 in contrast to about 60% in 1974, with the stocks of cod, redfish, Greenland halibut, roundnose grenadier, and capelin being the species most seriously affected.

In the present analysis, only the quantitative aspect of length sampling has been considered. However, it was observed much of the data are lacking in quality. In particular, the length composition data for the flatfish species and some others were not reported by sex as required, and in many cases where length sampling was quite adequate, no age-length keys were provided to enable the calculation of age compositions. Also, it was noted that sampling effort was not directed related to the months or quarters when catches were significant.

Table 1. Summary of Sampling Data by Species, Country and Division, 1975.

	ICNAF Div.	Quarter 1 No.	Meas.	Aged	Quarter 2 No.	Meas.	Aged	Quarter 3 No.	Meas.	Aged	Quarter 4 No.	Meas.	Aged	Gears Sampled
COD														
CAN(M)	3K	1	263	47	-	-	-	-	-	-	-	-	-	OTB
	4R	3	906	165	-	-	-	2	400	87	-	-	-	OTB
	4T	-	-	-	9	1700	351	13	2406	442	5	1659	233	OTB,LHP,SDN,GN
	4Vn	10	3238	529	5	1488	281	3	879	140	-	-	-	OTB,LL
	4Vs	3	877	169	1	355	55	-	-	-	-	-	-	OTB
	4W	4	1130	212	4	1259	238	1	264	56	1	300	34	OTB,LL
	4X	2	521	107	5	1002	283	3	764	164	4	834	215	OTB,GN,LL
	5Ze	-	-	-	-	-	-	2	637	113	-	-	-	OTB
CAN(N)	2J	21	2821	393	-	-	-	22	5196	907	-	-	-	OTB,GN,HL,FPN
	3K	6	643	...	-	-	-	55	10752	733	-	-	-	OTB,GN,HL,FPN
	3L	-	-	-	12	4190	(836)	24	7078	(751)	1	981	216	OTB,PT,HL,FPN
	3M	-	-	-	2	2250	488	-	-	-	-	-	-	PT
	3N	-	-	-	1	133	131	1	1258	202	-	-	-	OTB,PT
	3Ps	-	-	-	9	2578	(656)	18	6044	(964)	-	-	-	OTB,GN,LL
	4R	-	-	-	35	7901	(993)	1	218	(350)	-	-	-	OTB,GN
	4S	-	-	-	1	305	82	-	-	-	-	-	-	OTB
DEN(G)	1C	4	3892	479	2	2150	901	1	370	68	-	-	-	OTB,FPN
	1D	-	-	-	3	4310	493	3	1913	417	1	1028	...	OTB,FPN
FRG	1D	-	-	-	1	139	127	-	-	-	-	-	-	OTB
	1E	-	-	-	1	207	207	-	-	-	-	-	-	OTB
	1F	1	191	186	-	-	-	-	-	-	1	135	129	OTB
	2J	11	4212	879	-	-	-	-	-	-	-	-	-	OTB
	3K	16	4486	561	-	-	-	-	-	-	-	-	-	OTB
GDR	2J	4	792	301	-	-	-	-	-	-	-	-	-	OTB
	3K	30	19204	2277	-	-	-	-	-	-	-	-	-	OTB
POL	2J	14	6630	412	-	-	-	-	-	-	-	-	-	OTB
	3K	6	2684	105	-	-	-	-	-	-	-	-	-	OTB
POR	3L	-	-	-	-	-	-	-	-	-	10	719	133	OTB
	3M	-	-	-	-	-	-	-	-	-	10	1009	116	OTB
SPA	4Vn	5	1610	204	-	-	-	-	-	-	-	-	-	PTB
	5Ze	4	572	214	-	-	-	-	-	-	-	-	-	PTB
USSR	2J	33	21955	598	-	-	-	-	-	-	-	-	-	OTB
	3K	16	9930	506	-	-	-	-	-	-	-	-	-	OTB
	4W	1	200	...	-	-	-	-	-	-	-	-	-	OTB
UK	1E	-	-	-	1	364	...	-	-	-	-	-	-	OTB
	3L	-	-	-	-	-	-	-	-	-	1	227	...	OTB
	3M	-	-	-	-	-	-	-	-	-	1	105	...	OTB
USA	4X	1	109	...	-	-	-	-	-	-	-	-	-	OTB
	5Y	-	-	-	-	-	-	-	-	-	1	62	...	OTB
	5Ze	15	1886	...	17	2118	...	13	1714	...	11	1630	...	OTB
HADDOCK														
CAN(M)	4W	1	211	34	2	585	70	-	-	-	2	452	63	OTB,LL
	4X	8	2226	247	19	4132	629	19	4632	599	10	2842	348	OTB,LL,HL
	5Ze	-	-	-	-	-	-	-	-	-	1	271	33	OTB
CAN(N)	3Ps	-	-	-	2	797	280	-	-	-	-	-	-	OTB
USSR	4W	-	-	-	19	3740	...	16	3198	...	-	-	-	OTB
	4X	-	-	-	-	-	-	17	3395	...	-	-	-	OTB
USA	4W	2	170	39	-	-	-	-	-	-	-	-	-	OTB
	4X	18	1389	304	11	928	205	-	-	-	-	-	-	OTB
	5Y	1	61	15	1	100	27	-	-	-	-	-	-	OTB
	5Ze	21	1594	423	19	1428	556	10	878	177	-	-	-	OTB
REDFISH														
CAN(N)	3L	-	-	-	-	-	-	-	-	-	7	3395	...	OTM
	3M	-	-	-	2	1160	...	-	-	-	2	786	...	OTM,OTB
	3Pn	-	-	-	2	877	...	1	381	...	-	-	-	OTM
	3Ps	-	-	-	1	608	...	11	5044	...	-	-	-	OTM,OTB
	4R	-	-	-	7	3119	...	5	2420	...	4	1628	...	OTM,OTB
	4S	-	-	-	7	3049	...	3	1773	...	7	3381	...	OTM,OTB
	4T	-	-	-	2	874	...	-	-	-	-	-	-	OTM

Table 1. (Cont'd)

	ICNAF Div.	Quarter 1 No.	Meas.	Aged	Quarter 2 No.	Meas.	Aged	Quarter 3 No.	Meas.	Aged	Quarter 4 No.	Meas.	Aged	Gears Sampled
REDFISH (Cont'd)														
GDR	3K	1	392	...	-	-	-	-	-	-	-	-	-	OTB
JAP	3Ps	-	-	-	-	-	-	-	-	-	2	200	...	OTB
	5Ze	-	-	-	-	-	-	2	200	...	-	-	-	OTB
POL	2J	3	1198	...	-	-	-	-	-	-	-	-	-	OTB
	3K	3	1188	...	-	-	-	-	-	-	-	-	-	OTB
USSR	2J	3	1145	...	-	-	-	-	-	-	-	-	-	OTB
	4W	-	-	-	17	3441	...	-	-	-	-	-	-	OTB
USA	4W	5	500	...	1	100	...	6	600	...	7	700	...	OTB
	4X	1	100	...	1	100	...	6	600	...	2	200	...	OTB
	5Y	22	2209	...	21	2103	...	9	898	...	3	300	...	OTB
	5Ze	4	360	...	10	994	...	2	204	...	-	-	-	OTB
SILVER HAKE														
USSR	4W	-	-	-	483	96730	348	440	88146	277	...	...	221	OTB,OTM
	4X	-	-	-	71	14203	154	81	16094	288	-	-	-	OTB
	5Ze	115	23042	249	141	28359	271	165	32920	204	43	8600	212	OTB,OTM
	5Zw+6	31	6200	215	16	3188	225	-	-	-	-	-	-	OTB,OTM
USA	5Y	1	80	240	6	616	260	-	-	-	-	-	-	OTB
	5Ze	1	103	369	4	407	...	-	-	-	5	448	251	OTB
	5Zw+6	14	2275	...	6	522	...	6	440	...	22	1252	...	OTB
RED HAKE														
USSR	5Ze	24	4834	280	43	8812	347	115	23054	339	28	5623	221	OTB
	5Zw	5	1004	...	-	-	-	-	-	-	-	-	-	OTB
USA	5Zw	11	459	...	7	149	...	3	118	...	10	578	...	OTB
	6A	3	244	...	1	37	...	-	-	-	-	-	-	OTB
POLLOCK														
CAN(M)	4W	1	209	34	4	1026	166	-	-	-	2	496	67	OTB
	4X	2	518	66	11	2035	404	5	988	180	3	893	125	OTB,GN
	5Y	-	-	-	-	-	-	1	115	32	-	-	-	OTB
	5Ze	-	-	-	-	-	-	3	920	105	5	1252	223	OTB
USSR	4W	-	-	-	5	1000	...	-	-	-	-	-	-	OTB
USA	4X	1	102	...	-	-	-	-	-	-	-	-	-	OTB
	5Y	1	103	...	1	101	...	-	-	-	-	-	-	OTB
	5Ze	1	75	...	1	98	...	1	101	...	-	-	-	OTB
A. PLAICE														
CAN(M)	3O	-	-	-	-	-	-	1	200	46	-	-	-	OTB
	3Ps	1	219	73	1	200	43	-	-	-	-	-	-	OTB
	4T	3	600	102	2	401	85	-	-	-	-	-	-	OTB,DS
	4Vs	5	994	217	-	-	-	1	200	64	-	-	-	OTB
	4X	-	-	-	-	-	-	-	-	-	1	162	75	OTB
CAN(N)	3K	-	-	-	-	-	-	9	2371	331	-	-	-	GN
	3L	-	-	-	5	1166	365	5	2192	322	7	2895	632	OTB
	3N	-	-	-	5	1275	498	8	2790	529	5	2110	588	OTB,PT
	3O	-	-	-	4	929	323	5	1838	343	-	-	-	OTB
	3Ps	-	-	-	2	1208	271	-	-	-	1	501	255	OTB
POL	2J	1	848	105	-	-	-	-	-	-	-	-	-	OTB
	3K	1	703	110	-	-	-	-	-	-	-	-	-	OTB
	3N	1	580	104	-	-	-	-	-	-	-	-	-	OTB
USSR	1C	23	7139	...	-	-	-	-	-	-	-	-	-	OTB
USA	5Y	-	-	-	5	313	...	4	253	...	3	184	...	OTB
	5Ze	-	-	-	8	580	...	2	142	...	2	153	...	OTB
WITCH FLOUNDER														
CAN(M)	3Ps	-	-	-	1	200	58	-	-	-	-	-	-	OTB
	4R	-	-	-	1	200	72	-	-	-	-	-	-	OTB
	4S	1	200	39	-	-	-	-	-	-	-	-	-	OTB
	4Vn	2	401	89	3	600	104	-	-	-	-	-	-	OTB,DS
	4Vs	3	600	92	-	-	-	1	200	41	-	-	-	OTB
	4W	-	-	-	1	200	62	-	-	-	1	200	56	OTB

Table 1. (Cont'd)

	ICNAF Div.	Quarter 1 No.	Meas.	Aged	Quarter 2 No.	Meas.	Aged	Quarter 3 No.	Meas.	Aged	Quarter 4 No.	Meas.	Aged	Gears Sampled
WITCH FLOUNDER (Cont'd)														
CAN(N)	3K	-	-	-	-	-	-	13	2498	...	-	-	-	GN
	3L	-	-	-	-	-	-	1	308	88	1	494	85	OTB
	3N	-	-	-	1	345	96	-	-	-	-	-	-	OTB
	30	-	-	-	2	876	196	-	-	-	-	-	-	OTB
	3Ps	-	-	-	4	2002	468	-	-	-	-	-	-	OTB
	4R	-	-	-	1	385	95	-	-	-	-	-	-	OTB
POL	3K	1	950	...	-	-	-	-	-	-	-	-	-	OTB
USA	5Y	-	-	-	3	184	...	12	796	...	2	110	...	OTB
	5Ze	4	242	...	1	80	...	2	159	...	1	50	...	OTB
YELLOWTAIL FLOUNDER														
CAN(M)	30	-	-	-	-	-	-	1	200	39	-	-	-	OTB
	4T	-	-	-	-	-	-	1	200	40	-	-	-	OTB
	4Vs	-	-	-	1	200	59	-	-	-	-	-	-	OTB
CAN(N)	3L	-	-	-	4	1704	252	1	259	31	-	-	-	OTB
	3N	-	-	-	5	1871	417	6	2401	217	4	1892	338	OTB
	30	-	-	-	3	1792	241	2	1414	106	1	407	160	OTB
USSR	4W	-	-	-	-	-	-	2	400	...	-	-	-	OTB
USA	5Z(E69)	20	2281	745	17	2175	971	38	4607	1237	29	3576	1175	OTB
	5Z(W69)+6	14	1751	803	6	763	498	3	347	879	3	504	899	OTB
G. HALIBUT														
CAN(N)	3K	-	-	-	-	-	-	10	2640	341	-	-	-	GN
DEN(G)	1D	2	1833	...	2	1952	...	-	-	-	-	-	-	LL
GDR	3K	1	200	200	-	-	-	-	-	-	-	-	-	OTB
POL	3K	5	3187	...	-	-	-	-	-	-	-	-	-	OTB
USSR	0	5	1182	...	-	-	-	-	-	-	-	-	-	OTB
WINTER FLOUNDER														
CAN(M)	4T	-	-	-	2	350	137	1	200	47	-	-	-	OTB
USA	5Ze	17	1021	...	23	1455	...	36	2042	...	40	2405	...	OTB
	5Zw	3	309	...	2	190	...	-	-	-	1	57	...	OTB
	6A	-	-	-	4	478	...	2	270	...	1	147	...	OTB
SUMMER FLOUNDER														
USA	5Ze	-	-	-	-	-	-	2	136	...	-	-	-	OTB
	5Zw	-	-	-	3	162	...	-	-	-	6	261	...	OTB
	6A	4	270	...	-	-	-	-	-	-	-	-	-	OTB
WINDOWPANE FLOUNDER														
USA	5Ze	7	814	...	7	882	...	-	-	-	2	277	...	OTB
	5Zw	4	535	...	2	310	...	-	-	-	-	-	-	OTB
ROUNDNOSE GRENADIER														
DEN(G)	1C	-	-	-	-	-	-	-	-	-	1	141	...	OTB
GDR	1C	-	-	-	-	-	-	-	-	-	1	147	74	OTB
HERRING														
FRA(M)	5Ze	-	-	-	-	-	-	8	1608	...	-	-	-	OTM
FRG	4X	3	424	192	-	-	-	-	-	-	-	-	-	OTB
	5Z	30	6158	814	-	-	-	10	1016	988	-	-	-	OTB,OTM
GDR	5Ze	30	4734	698	-	-	-	36	11286	2462	-	-	-	OTB,OTM
JAP	5Ze	-	-	-	-	-	-	37	4033	...	8	1009	...	OTB
POL	5Ze	-	-	-	7	1874	206	26	8304	699	20	6453	509	OTB,OTM
	5Zw	5	1467	109	-	-	-	-	-	-	-	-	-	OTB
	6A	3	714	106	4	1291	301							

Table 1. (Cont'd)

	ICNAF Div.	Quarter 1 No.	Meas.	Aged	Quarter 2 No.	Meas.	Aged	Quarter 3 No.	Meas.	Aged	Quarter 4 No.	Meas.	Aged	Gears Sampled
HERRING (Cont'd)														
USSR	4W	-	-	-	-	-	-	3	527	...	-	-	-	OTB
	5Z	22	4472	138	23	4603	270	40	8000	126	66	13200	143	OTB,OTM
USA	5Y	18	1085	476	32	2668	828	111	9795	1761	52	5531	939	(NS)
	5Zw	32	2460	555	1	53	54	-	-	-	-	-	-	(NS)
MACKEREL														
BUL	5Ze	26	9784	(1259)	-	-	-	-	-	-	-	-	-	OTM
	5Zw	17	5864	(1259)	-	-	-	-	-	-	-	-	-	OTM
	6A	12	4425	(1259)	-	-	-	-	-	-	-	-	-	OTM
CAN(M)	4T	-	-	-	10	1000	296	11	1100	374	1	100	50	PS,GN,HL
	4Vn	-	-	-	-	-	-	1	100	53	8	800	278	PS,HL
	4W	-	-	-	6	600	163	-	-	-	1	100	25	GN,FPN
	4X	-	-	-	13	1300	508	10	1000	406	2	200	79	GN,FPN,FWR
CAN(N)	3K	-	-	-	-	-	-	8	360	360	3	120	120	PS,BS,FPN
	3L	-	-	-	2	75	75	19	847	847	7	275	275	PS,GN,FPN
	4R	-	-	-	-	-	-	8	375	375	-	-	-	FPN
GDR	5Ze	-	-	-	-	-	-	-	-	-	23	6038	193	OTM
	6A	38	12124	398	27	4252	90	-	-	-	-	-	-	OTM
JAP	6A	5	571	...	-	-	-	-	-	-	-	-	-	OTB
	6B	1	177	...	2	96	...	-	-	-	-	-	-	OTB
POL	5Ze	4	1958	...	1	1630	...	-	-	-	1	508	102	OTB,OTM
	5Zw	8	2330	400	7	2361	493	-	-	-	1	365	116	OTB,OTM
	6A	6	1270	302	13	4280	574	-	-	-	-	-	-	OTM
	6B	5	1392	403	8	2746	1198	-	-	-	-	-	-	OTM
	6C	6	1472	496	-	-	-	-	-	-	-	-	-	OTM
USSR	4VWX	-	-	-	6	1282	...	24	4800	...	3	600	...	OTB
	5Z	249	49815	283	83	16521	(360)	6	1200	...	-	-	-	OTB,OTM
	6	7	1398	...	12	2481	(360)	-	-	-	-	-	-	OTB,OTM
USA	5Y	-	-	-	3	168	46	1	100	32	-	-	-	OTB,FPN
BUTTERFISH														
JAP	4X	1	198	...	-	-	-	-	-	-	-	-	-	OTB
	5Zw	8	1227	...	-	-	-	-	-	-	-	-	-	OTB
	6A	12	1270	...	2	61	...	-	-	-	-	-	-	OTB
	6B	21	2239	...	41	3047	...	-	-	-	-	-	-	OTB
	6C	-	-	-	15	1172	...	-	-	-	4	546	...	OTB
USSR	5Z+6	2	400	...	19	3402	...	5	1069	...	-	-	-	OTB
ALEWIFE														
USSR	4W	-	-	-	75	14958	...	-	-	-	-	-	-	OTB
	5Z	1	200	...	6	1200	...	1	180	...	-	-	-	OTB
ARGENTINE														
USSR	4W	-	-	-	89	17769	356	-	-	-	-	-	-	OTB
	4X	-	-	-	-	-	-	8	1510	266	-	-	-	OTB
CAPELIN														
CAN(N)	2J	-	-	-	-	-	-	-	-	-	3	150	150	OTM
	3K	-	-	-	-	-	-	-	-	-	12	599	599	OTM
	3L	-	-	-	6	296	296	8	396	396	-	-	-	OTM,BS
	3N	-	-	-	19	950	950	-	-	-	-	-	-	OTM
	3O	-	-	-	1	50	50	1	50	50	-	-	-	OTM
	3Ps	-	-	-	15	750	750	1	50	50	-	-	-	BS
JAP	3N	-	-	-	1	200	...	-	-	-	-	-	-	OTB
NOR	3K	-	-	-	-	-	-	1	50	50	-	-	-	OTM
	3N	-	-	-	10	815	777	5	400	400	-	-	-	OTM
POL	3N	-	-	-	2	4399	600	-	-	-	-	-	-	OTM
	3O	-	-	-	1	5513	490	-	-	-	-	-	-	OTM

Table 1. (Cont'd)

	ICNAF Div.	Quarter 1 No.	Meas.	Aged	Quarter 2 No.	Meas.	Aged	Quarter 3 No.	Meas.	Aged	Quarter 4 No.	Meas.	Aged	Gears Sampled
SQUID-*LOLIGO*														
JAP	5Ze	5	655	...	-	-	-	-	-	-	2	393	...	OTB
	5Zw	1	108	...	-	-	-	-	-	-	-	-	-	OTB
	6A	9	1076	...	2	212	...	-	-	-	2	292	...	OTB
	6B	14	1325	...	38	4049	...	-	-	-	4	775	...	OTB
	6C	4	381	...	19	1725	...	-	-	-	4	600	...	OTB
POL	5Z	4	1207	...	20	2630	...	-	-	-	-	-	-	OTB
	6A	15	3330	...	-	-	-	-	-	-	-	-	-	OTB
USSR	5Z	236	47242	...	18	3599	...	-	-	-	-	-	-	OTB
USA	5Ze	-	-	-	-	-	-	-	-	-	1	94	...	OTB
	5Zw	1	90	...	4	383	...	6	606	...	6	335	...	OTB
	6A	-	-	-	-	-	-	-	-	-	2	183	...	OTB
SQUID-*ILLEX*														
JAP	5Ze	-	-	-	-	-	-	1	203	...	-	-	-	OTB
	6A	-	-	-	-	-	-	4	493	...	2	202	...	OTB
	6B	-	-	-	30	4377	...	17	2001	...	3	404	...	OTB
	6C	-	-	-	11	1124	...	-	-	-	-	-	-	OTB
POL	5Z	-	-	-	16	5792	...	-	-	-	-	-	-	OTB
USSR	4VWX	-	-	-	42	8440	...	33	6634	...	-	-	-	OTB
	5Z	37	7237	...	20	3917	...	21	4210	...	-	-	-	OTB
	6	-	-	-	36	7265	...	104	20863	...	-	-	-	OTB

Table 2. Sampling efficiency in relation to nominal catches by species, area and country, 1975.

Species	Stock area	Country	Nominal catches by quarter 1	2	3	4	Total for countries listed	%	Sampling efficiency 1	2	3	4	Total
COD	1	DEN(F)	...	...	...	...	5355		...	...	...	...	*
		DEN(G)	3745	4532	3270	866	19314		1.0	1.0	1.3	1.0	0.7
		FRG	5308	4205	-	1329	10842		0.2	0.5	-	1.0	0.4
		NOR	791	636	50	1591	3068		-	-	-	*	*
		POR	-	2796	2024	120	4940		-	*	*	-	*
		SPA	21	276	2293	1427	4017		-	-	*	*	*
		Total	9865	12445	7637	5333	47536	(99)	0.5	0.7	0.5	0.4	0.4
	2GH	FRG	3252	-	-	83	3335		*	-	-	-	*
		USSR	1154	107	351	1100	2712		*	-	-	*	*
		Total	4406	107	351	1183	6047	(87)	*	-	-	*	*
	2J+3KL	CAN	596	6752	32711	2423	42482		28.0	1.7	3.1	0.5	3.4
		DEN	...	...	...	...	2596		...	...	...	...	*
		FRA	2321	291	7	23	2642		*	-	-	-	*
		FRG	27065	-	-	-	27065		1.0	-	-	-	1.0
		GDR	22265	-	-	-	22265		1.5	-	-	-	1.5
		POL	13086	1060	133	924	15203		1.5	*	-	-	1.3
		POR	18310	4274	11388	13330	47302		*	*	*	0.8	0.2
		SPA	4701	32905	192	673	38471		*	*	-	-	*
		USSR	33898	17738	13864	22811	88311		1.4	*	*	*	0.6
		Total	122242	63020	58295	40184	286337	(99)	1.3	0.2	1.7	0.3	1.0
	3M	CAN	-	106	2	-	108		-	2.0	-	-	2.0
		DEN	...	...	...	...	3288		...	...	...	...	*
		POR	173	115	9772	370	10430		-	-	*	10.0	1.0
		SPA	26	1309	634	53	2022		-	*	-	-	*
		USSR	534	394	1258	3260	5446		-	-	*	*	*
		UK	-	-	87	178	265		-	-	-	1.0	1.0
		Total	733	1924	11753	3861	21459	(96)	-	1.0	*	2.7	0.6
	3NO	CAN	3	598	283	305	1189		-	1.0	1.0	-	2.0
		POR	44	19	5497	-	5560		-	-	*	-	*
		SPA	580	9139	6740	157	16616		-	*	*	-	*
		USSR	867	10173	4808	4937	20785		-	*	*	*	*
		Total	1494	19929	17328	5399	44150	(99)	-	0.0	0.1	*	0.0
	3Ps	CAN	902	6247	6156	1890	15195		-	1.5	3.0	*	1.8
		FRA	3132	668	468	56	4324		*	-	-	-	*
		POR	1350	-	-	-	1350		*	-	-	-	*
		SPA	8084	20	10	4120	12234		*	-	-	*	*
		USSR	34	181	282	1291	1788		-	-	-	*	*
		Total	13502	7116	6916	7357	34891	(99)	*	1.3	2.6	*	0.8
	4TVn	CAN	6545	11362	10275	6629	34811		1.7	1.3	1.6	0.8	1.3
		FRA	3416	1582	-	540	5538		*	*	-	-	*
		SPA	3440	-	-	89	3529		1.7	-	-	-	1.7
		Total	13401	12944	10275	7258	43878	(94)	1.2	1.1	1.6	0.7	1.1
	4VsW	CAN	2252	3815	2649	1223	9939		3.5	1.3	0.3	1.0	1.4
		FRA	1458	409	-	-	1867		*	-	-	-	*
		SPA	7535	899	913	6264	15611		*	-	-	*	*
		USSR	607	1268	446	721	3042		1.0	*	-	-	0.3
		Total	11852	6391	4008	8208	30459	(94)	0.7	0.8	0.2	0.1	0.5
	4X	CAN	1208	7149	7765	3371	19493	(92)	2.0	0.7	0.4	1.3	0.7
	5Y	USA	2271	1889	1789	2715	8903	(99)	*	*	*	0.3	0.1
	5Z	CAN	11	645	981	210	1847		-	-	2.0	-	1.0
		SPA	1616	744	621	1063	4044		2.0	-	-	*	1.0
		USSR	430	1157	414	390	2391		-	*	-	-	*
		USA	2914	4557	4289	3463	15240		5.0	3.4	3.3	3.7	3.7
		Total	4971	7103	6305	5126	23522	(98)	3.8	2.4	2.5	2.2	2.6
HADDOCK	4VW	CAN	309	488	469	301	1567		1.0	2.0	-	2.0	2.5
		USSR	1	16	35	-	52		-	(19.0)	(16.0)	-	(35.0)
		USA	11	9	1	-	21		(2.0)	-	-	-	(2.0)
		Total	321	513	505	301	1640	(90)					

Species	Stock area	Country	Nominal catches by quarter 1	2	3	4	Total for countries listed	%	Sampling efficiency 1	2	3	4	Total
HADDOCK (Cont'd)	4X	CAN	1288	4698	6758	3315	16059		8.0	3.8	2.7	3.3	3.5
		USSR	-	25	14	-	39		-	-	(17.0)	-	(17.0)
		USA	991	1042	38	72	2143		18.0	11.0	-	-	14.5
		Total	2279	5765	6810	3387	18241	(100)					
	5	CAN	22	195	874	346	1437		-	-	-	1.0	1.0
		USA	700	2019	1245	783	5165		22.0	10.0	10.0	-	10.4
		Total	722	2214	2119	1129	6602	(99)	22.0	5.0	5.0	1.0	6.1
REDFISH	2+3K	FRG	1837	-	-	-	1837		*	-	-	-	*
		GDR	2384	-	45	18	2447		0.5	-	-	-	0.5
		POL	2820	1121	226	52	4219		2.0	*	-	-	1.5
		POR	1149	377	1024	421	2971		*	-	*	-	*
		USSR	5767	3693	3768	455	13683		0.5	*	*	-	0.2
		Total	13957	5191	5063	946	25157	(98)	0.7	*	*	-	0.4
	3M	CAN	-	259	141	259	659		-	2.0	-	2.0	4.0
		POR	135	549	1030	750	2464		-	-	*	-	*
		USSR	2685	3437	3208	3063	12393		*	*	*	*	*
		Total	2820	4245	4379	4072	15516	(97)	*	0.5	*	0.5	0.3
	3LN	CAN	-	242	142	1493	1877		-	-	-	7.0	3.5
		USSR	3855	2712	6114	1847	14528		*	*	*	*	*
		Total	3855	2954	6256	3340	16405	(92)	*	*	*	2.3	0.4
	3P	CAN	4209	2876	10246	1408	18739		*	1.0	1.2	*	0.8
		USSR	-	3055	2478	2579	8112		-	*	*	*	*
		Total	4209	5931	12724	3987	26851	(95)	*	0.5	0.9	*	0.6
	4VWX	CAN	1645	5116	6734	3530	17025		*	*	*	*	*
		USSR	956	1756	651	1486	4849		-	8.5	-	*	3.4
		USA	543	713	2461	1748	5465		6.0	2.0	6.0	4.5	5.8
		Total	3144	7585	9846	6764	27339	(98)	2.0	4.8	1.2	1.3	1.7
	5	USA	1787	3798	2423	1070	9075	(86)	13.0	7.8	5.5	3.0	7.8
S. HAKE	4VWX	USSR	6984	38238	66702	642	112566	(97)	-	14.5	7.8	-	9.5
	5Y	USA	95	2327	3064	2551	8042	(88)	1.0	3.0	*	*	0.9
	5Ze	BUL	-	1021	-	-	1021		-	*	-	-	*
		CUBA	-	-	1101	203	1304		-	-	*	-	*
		USSR	16707	12460	17665	8963	55795		6.8	11.7	9.2	4.8	8.3
		USA	10	290	3514	769	4588		1.0	4.0	*	5.0	2.0
		Total	16717	13771	22280	9935	62708	(99)	6.8	10.4	7.5	4.8	7.5
	5Zw+6	USSR	13950	16291	1654	346	32241		2.2	1.0	*	-	1.5
		USA	3646	2501	717	1391	8479		3.5	2.0	6.0	22.0	6.0
		Total	17596	18792	2371	1737	40720	(97)	2.5	1.2	3.0	11.0	2.3
RED HAKE	5Ze	USSR	894	5587	4912	3528	14921	(99)	24.0	7.1	23.0	28.0	14.0
	5Zw+6	USSR	3418	7761	16	-	11195		1.7	*	-	-	0.5
		USA	602	474	311	668	2065		14.0	8.0	3.0	10.0	17.5
		Total	4020	8235	327	668	13260	(100)	4.8	1.0	3.0	10.0	3.1
POLLOCK	4VWX	CAN	1031	5765	6747	8345	21888		3.0	2.5	0.7	0.6	1.3
		USSR	398	1002	303	113	1816		-	5.0	-	-	2.5
		USA	422	133	71	115	741		1.0	-	-	-	1.0
		Total	1851	6900	7121	8573	24445	(97)	2.0	2.9	0.7	0.6	1.4
A. PLAICE	2+3K	CAN	16	68	752	23	859		-	-	9.0	-	9.0
		POL	26	35	8	26	95		2.0	-	-	-	2.0
		USSR	1823	402	1063	1161	4449		*	-	*	*	*
		Total	1865	505	1823	1210	5403	(94)	1.0	-	4.5	*	2.2

Species	Stock area	Country	Nominal catches by quarter 1	2	3	4	Total for countries listed	%	Sampling efficiency 1	2	3	4	Total
A. PLAICE (Cont'd)	3LNO	CAN	19	6707	15383	11906	34015		-	2.0	1.2	1.0	1.3
		POL	472	65	-	-	537		1.0	-	-	-	1.0
		USSR	352	2734	2839	1757	7682		-	*	*	*	*
		Total	843	9506	18222	13663	42234	(98)	1.0	1.4	1.0	0.9	1.1
	3Ps	CAN	1279	1208	409	922	3818	(91)	1.0	3.0	-	1.0	1.0
	4VWX	CAN	2902	1937	1150	634	6623		1.7	*	1.0	1.0	1.0
		USSR	254	1228	2034	1514	5030		-	*	*	*	*
		Total	3156	3165	3184	2148	11653	(99)	1.7	*	0.3	0.5	0.6
WITCH	2J+3KL	CAN	44	81	1077	150	1352		-	-	14.0	1.0	15.0
		POL	2848	1647	14	74	4583		0.3	*	-	-	0.2
		USSR	396	1246	1816	1305	4763		-	*	*	*	*
		Total	3288	2974	2907	1529	10698	(88)	0.3	*	4.6	0.5	1.5
	3NO	CAN	-	911	31	195	1137		-	3.0	-	-	3.0
		USSR	546	1999	1314	1160	5019		-	*	*	*	*
		Total	546	2910	1345	1355	6156	(100)	-	1.0	*	*	0.5
	3Ps	CAN	142	836	201	191	1370	(96)	-	5.0	-	-	5.0
	4VWX	CAN	1197	1425	400	384	3406		5.0	4.0	1.0	1.0	3.7
		USSR	273	1335	2196	1628	5432		-	*	*	*	*
		Total	1470	2760	2596	2012	8838	(99)	5.0	1.3	0.3	0.5	1.2
	5+6	USA	282	794	643	387	2106	(90)	4.0	4.0	14.0	3.0	12.5
YELLOWTAIL	3LNO	CAN	4	6106	7637	4711	18458		-	2.0	1.3	1.0	1.5
		USSR	496	1681	990	909	4076		-	*	-	-	*
		Total	500	7787	8627	5620	22534	(98)	-	1.5	1.1	0.8	1.2
	4VWX	CAN	15	746	288	34	1083		-	1.0	-	-	1.0
		USSR	21	100	163	116	400		-	-	2.0	-	2.0
		Total	36	846	451	150	1483	(95)					
	5+6	USA	4229	3702	6969	3485	18385	(94)	8.5	5.8	5.8	8.0	7.2
G. HALIBUT	0+1	DEN	571	956	1029	300	4551		2.0	2.0	*	-	0.8
		USSR	934	77	403	18816	20230		5.0	-	-	*	0.3
		Total	1505	1033	1432	19116	24781	(99)	3.5	2.0	*	*	0.4
	2+3KL	CAN	28	972	6218	589	7807		-	-	1.7	-	1.3
		GDR	1326	-	499	200	2025		1.0	-	-	-	0.5
		POL	3228	2948	1339	932	8447		1.7	*	*	-	0.6
		USSR	2339	1574	3149	2377	9439		*	*	*	*	*
		Total	6921	5494	11205	4098	27718	(97)	0.9	*	0.9	*	0.6
R. GRENADIER	0+1	GDR	46	-	-	140	186		-	-	-	1.0	1.0
		USSR	158	150	1418	3002	4728		-	-	*	*	*
		Total	204	150	1418	3142	4914	(99)	-	-	*	0.3	0.2
	2+3	GDR	403	-	1612	690	2705		-	-	*	-	*
		USSR	2012	2326	13167	5716	23221		*	*	*	*	*
		Total	2415	2326	14779	6406	25926	(95)	*	*	*	*	*
HERRING	4WX	CAN	24995	27710	91950	14969	159624		*	*	*	*	*
		USSR	560	11602	7196	2526	21884		-	*	0.4	*	0.1
		Total	25555	39312	99146	17495	181508	(99)	*	*	*	*	*
	5Y	CAN	-	75	4987	22	5084		-	-	*	-	*
		USA	4183	2319	11981	13109	31592		4.5	16.0	9.2	4.0	6.6
		Total	4183	2394	16968	13131	36676	(99)	4.5	16.0	6.5	4.0	5.8
	5Z+6	FRA	-	-	2339	965	3304		-	-	4.0	-	2.6
		FRG	-	-	20826	2131	22957		-	-	0.5	*	0.4
		GDR	11	198	17986	12706	30901		-	-	2.0	*	1.2
		JAP	2	-	1421	455	1878		-	-	37.0	8.0	22.5
		POL	1773	1376	19406	15837	38392		4.0	11.0	1.3	1.3	1.7
		USSR	1030	14234	12432	13249	40945		22.0	1.6	3.3	5.0	3.7
		USA	4382	143	3	55	4583		8.0	1.0	-	-	6.6
		Total	7198	15951	74413	45398	142960	(98)	8.9	2.2	2.1	2.1	2.4

Table 2. (Cont'd)

Species	Stock area	Country	Nominal catches by quarter 1	2	3	4	Total for countries listed	%	Sampling efficiency 1	2	3	4	Total
MACKEREL	3+4	CAN	-	3294	6185	4061	13540		-	10.3	9.5	5.5	7.9
		USSR	5302	5156	6456	4628	21542		*	1.2	4.0	0.6	1.5
		Total	5302	8450	12641	8689	35082	(97)	*	4.6	6.2	2.8	4.1
	5+6	BUL	13966	2068	-	2723	18757		3.9	*	-	*	2.9
		GDR	29320	6673	7	12343	48343		1.3	3.9	-	1.9	1.8
		JAP	18	186	-	-	204		6.0	2.0			
		POL	37644	5636	1797	29204	74281		0.8	4.8	*	0.1	0.8
		USSR	77679	27431	630	572	106312		3.3	3.5	6.0	-	3.4
		USA	376	937	34	299	1974		-	3.0	1.0	-	2.0
		Total	159003	42931	2468	45141	249871	(99)	2.4	3.6	3.5	0.6	2.3
ARGENTINE	4VWX	USSR	163	7066	4824	2598	14651	(100)	-	12.7	1.6	*	6.5
CAPELIN	2+3K	CAN	-	159	539	-	698		-	-	-	(15)	(15)
		NOR	-	-	2	-	2		-	-	-	(1)	(1)
		POL	-	-	9883	10384	20267		-	-	*	*	*
		USSR	285	5870	93977	75764	175896		-	*	*	*	*
		Total	285	6029	104401	86148	196863	(99)	-	*	*	*	*
	3LNOPs	CAN	-	2880	937	-	3817		-	13.7	10.0	-	12.8
		ICE	-	9300	6514	-	15814		-	*	*	-	*
		JAP	-	2068	666	-	2734		-	0.5	-	-	0.3
		NOR	-	23236	14241	-	37477		-	0.4	0.4	-	0.4
		POL	-	1057	3551	-	4608		-	3.0	*	-	0.6
		SPA	-	-	4284	-	4284		-	-	*	-	*
		USSR	11054	82997	3266	928	98245		*	*	*	-	*
		Total	11054	121538	33459	928	166979	(100)	*	0.4	0.5	-	0.4
SQUID-*LOLIGO*	5+6	ITA	1620	552	105	1113	3390		*	-	-	*	*
		JAP	4827	1076	13	4832	10748		(33)	(59)	-	(12)	(104)
		POL	1875	145	159	1606	3785		(19)	-	-	*	(19)
		SPA	4965	997	-	1717	7679		*	-	-	*	*
		USSR	...	...	...	...	...		(236)	(18)	-	-	(254)
		USA	...	...	...	...	...		(1)	(4)	(6)	(9)	(20)
SQUID-*ILLEX*	3+4	CAN	-	1	3074	218	3293		-	-	*	-	*
		USSR	19	6927	4081	2607	13634		-	(42)	(33)	*	(75)
		Total	19	6928	7155	2825	16927	(96)					
	5+6	JAP	385	481	1425	946	3237		-	(41)	(22)	(5)	(68)
		POL	-	2596	455	-	3051		-	(16)	-	-	(16)
		SPA	181	598	1229	196	2204		-	-	*	-	*
		USSR	...	...	...	...	...		(37)	(56)	(125)	-	(218)

Table 3. Summary of sampling efficiency by country and stock in relation to nominal catches (000 tons) for 1975.

	COD 1	COD 2GH	COD 2J+3KL	COD 3M	COD 3NO	COD 3Ps	COD 4TVn	COD 4VsW	COD 4X	COD 5Y	COD 5Z	HAD 4VW	HAD 4X	HAD 5
BUL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CAN	-	-	42/3.5	+/2.0	1/2.0	15/1.8	35/1.3	10/1.4	19/0.7	-	2/1.0	2/2.5	16/3.5	1/1.0
DEN	25/0.5	-	3/***	3/***	-	-	-	-	-	-	-	-	-	-
FRA	-	-	3/***	-	-	4/***	6/***	2/***	-	-	-	-	-	-
FRG	11/0.4	3/***	27/1.0	-	-	-	-	-	-	-	-	-	-	-
GDR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOR	3/***	-	-	-	-	-	-	-	-	-	-	-	-	-
POL	-	-	15/1.3	-	-	-	-	-	-	-	-	-	-	-
POR	5/***	-	47/0.2	10/1.0	6/***	-	-	-	-	-	-	-	-	-
SPA	4/***	-	38/***	2/***	17/***	12/***	3/1.7	16/***	-	-	4/1.0	-	-	-
USSR	-	3/***	88/0.6	5/***	21/***	2/***	-	3/0.3	-	-	2/***	-	-	-
UK	-	-	-	+/1.0	-	-	-	-	-	-	-	-	-	-
USA	-	-	-	-	-	-	-	-	-	9/0.7	15/3.7	-	2/14.5	5/10.4
TOTAL	48/0.4	6/***	286/1.0	21/0.6	44/0.0	35/0.8	44/1.1	31/0.5	19/0.7	9/0.7	24/2.6	2/2.5	18/4.7	7/6.1
(%)	(99)	(87)	(99)	(96)	(99)	(99)	(94)	(94)	(92)	(99)	(98)	(90)	(99)	(99)

	RED 2+3K	RED 3M	RED 3LN	RED 3O	RED 3P	RED 4VWX	RED 5	S.H 5Y	S.H 5Ze	S.H 5Zw+6	R.H 5Ze	R.H 5Zw+6	POL 4VWX	A.P 2+3K	A.P 3LNO
BUL	-	-	-	-	-	-	-	-	1/***	-	-	-	-	-	-
CAN	2/***	1/4.0	2/3.5	-	19/0.8	17/***	-	-	-	-	-	-	22/1.3	1/9.0	34/1.3
DEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GDR	2/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POL	4/1.5	-	-	-	-	-	-	-	-	-	-	-	-	+/2.0	+/1.0
POR	3/***	2/***	-	-	-	-	-	-	-	-	-	-	-	-	-
SPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USSR	14/0.2	12/***	14/***	15/***	8/***	5/3.4	-	-	56/8.3	32/1.5	15/14.0	11/0.5	2/2.5	4/***	8/***
UK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USA	-	-	-	-	-	5/5.8	9/7.8	8/0.9	5/2.0	8/6.0	-	2/17.5	+/1.0	-	-
TOTAL	25/0.4	16/0.3	16/0.4	15/***	27/0.6	27/1.7	9/7.8	8/0.9	63/7.5	41/2.3	15/14.0	13/3.1	24/1.4	5/2.2	42/1.1
(%)	(98)	(97)	(92)	(100)	(95)	(98)	(86)	(88)	(98)	(97)	(99)	(100)	(97)	(94)	(98)

	A.P 3Ps	A.P 4VWX	WIT 2J+3KL	WIT 3NO	WIT 3Ps	WIT 4VWX	WIT 5+6	YEL 3LNO	YEL 4VWX	YEL 5+6	G.H 0+1	G.H 2+3KL
BUL	-	-	-	-	-	-	-	-	-	-	-	-
CAN	4/1.0	7/1.0	1/15.0	1/3.0	1/5.0	3/3.7	-	18/1.5	1/1.0	-	-	8/1.3
DEN	-	-	-	-	-	-	-	-	-	-	8/0.8	-
FRA	-	-	-	-	-	-	-	-	-	-	-	-
FRG	-	-	-	-	-	-	-	-	-	-	-	-
GDR	-	-	-	-	-	-	-	-	-	-	-	2/0.5
JAP	-	-	-	-	-	-	-	-	-	-	-	-
NOR	-	-	-	-	-	-	-	-	-	-	-	-
POL	-	-	5/0.5	-	-	-	-	-	-	-	-	8/0.6
POR	-	-	-	-	-	-	-	-	-	-	-	-
SPA	-	-	-	-	-	-	-	-	-	-	-	-
USSR	-	5/***	5/***	5/***	-	5/***	-	4/***	1/2.0	-	20/0.3	9/***
UK	-	-	-	-	-	-	-	-	-	-	-	-
USA	-	-	-	-	-	-	2/12.5	-	-	18/7.2	-	-
TOTAL (%)	4/1.0 (91)	12/0.6 (99)	11/1.5 (88)	6/0.5 (100)	1/5.0 (96)	9/1.2 (99)	2/12.5 (90)	23/1.2 (98)	2/1.5 (95)	18/7.2 (94)	25/0.4 (99)	28/0.6 (97)

	RNG 0+1	RNG 2+3	HER 4WX	HER 5Y	HER 5Z+6	MAC 3+4	MAC 5+6	ARG 4VWX	CAP 2+3K	CAP 3LNOPs
BUL	-	-	-	-	-	-	19/2.9	-	1/(15)	4/12.8
CAN	-	-	160/***[a]	5/***[a]	-	14/7.9	-	-	-	-
DEN	-	-	-	-	-	-	-	-	-	-
FRA	-	-	-	-	3/2.6	-	-	-	-	-
FRG	-	-	-	-	23/0.4	-	-	-	-	-
GDR	+/1.0	3/***	-	-	31/2.0	-	48/1.8	-	-	-
JAP	-	-	-	-	2/22.5	-	-	-	-	3/0.3
NOR	-	-	-	-	-	-	-	-	+/(1)	37/0.4
POL	-	-	-	-	38/1.7	-	+/8.0	-	20/***	5/0.6
POR	-	-	-	-	-	-	-	-	-	-
SPA	-	-	-	-	-	-	74/0.8	-	-	4/***
USSR	5/***	23/***	22/0.1	-	41/3.7	21/1.5	106/3.4	15/6.5	176/***	98/***
UK	-	-	-	-	-	-	-	-	-	-
USA	-	-	-	32/6.6	5/6.6	-	2/2.0	-	-	-
TOTAL (%)	5/0.2 (99)	26/*** (95)	182/*** (99)	37/5.8 (99)	143/2.4 (98)	35/4.1 (97)	250/2.3 (99)	15/6.5 (100)	197/0.0 (99)	151/0.4 (90)

[a] Sampling data not yet reported to Secretariat.