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Polish Research Report, 1976

by

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The overall Polish catches from ICNAF Convention Area - Sub-areas 1-5 and Statistical Subarea 6 dropped from 187,647 tons in 1975 to 125,488 tons in 1976. Table 1 gives detailed data concerning Polish catches of particular species from SA 1-6 in 1976 and 1975.

These data indicate that in 1976, Poland's major catches from the ICNAF Area constituted: Mackerel (51,549 tons), followed by Cod (20,403 tons), Capelin (15,121 tons), Herring (10,539 tons), Greenland halibut (5,942 tons), Squid Illex (5,859 tons), Redfish (4,029 tons), witch (4,029 tons), Squid Loligo (1,706 tons), Sea-robin (1,521 tons) and Butterfish (1,518 tons). Other species were insignificant.

In the same year, Polish fisheries extracted the greatest catches from SA5 (50,521 tons), with smaller quantities from SA3 (33,156 tons) SA6 (23,937 tons) and SA2 (17,060 tons). Catches from SA4 were insignificant (814 tons). As in previous years, Polish fisheries did not fish in SA1 or SA0.

The drop in Polish catches from the ICNAF Area in 1976 was due to the allotting of lower catch quotas than in 1975 by ICNAF: Herring in Div.5Z+SA6, Cod in Div.2J+3KL, Mackerel in SA5+6, Greenland halibut in SA2 + Div.3KL, Redfish in SA3, also the fact that the allotted quotas of Mackerel and Squid Illex from SA 3+6, Witch from Div.2J+3KL and others were not attained. Table 2 gives the percentage to which the catch quotas allocated to Poland by ICNAF were utilized in the particular Stock Divisions.

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## SUBAREA 2

### Status of the fisheries

In 1976, Polish trawlers operated in Div.2HJ of SA2, having worked in the grounds of Div.2G only one day - in August. Polish catches from SA2 in 1976 amounted to 17,060 tons which was 49.9% less than the 34,159 tons extracted in 1975.

The main component of Polish catches by means of bottom otter trawls in 1976, from Div.2HJ, was cod, followed by Greenland halibut, redfish and witch. American plaice, roundnose grenadier and wolffishes accounted for only a small quantity of catches.

Polish fisheries operated in Div.2H from June to October (primarily on Greenland halibut, then cod and redfish). Div.2J was worked in January and February (mainly cod), also from June to October (mainly Greenland halibut).

Capelin was taken from Div.2H by means of pelagic otter trawl in August, September and October, also Div.2J from June to October.

Table 3 gives the composition of Polish catches from SA2 in 1976, according to species.

### Cod

Polish cod catches from SA2 dropped from 8,502 tons in 1975 to 3,401 tons in 1976. In the latter year, 2,479 tons were taken from Div.2J, 911 tons from Div.2H and only 11 tons from Div.2G.

The major part of Polish cod catches (1,806 tons) from Div. 2J were taken in January and February (Table 4). During the summer and autumn, cod constituted by-catch with Greenland halibut catches from both Div.2J and Div.2H.

No biological research was conducted on cod from SA2 in 1976.

### Redfish

Redfish catches from SA2 increased from 943 tons in 1975 to 1,076 tons in 1976. In 1976, 668 tons of this species were taken from Div.2H between June and October, also Div. 2J in January and February, as well as June to October (Table 5).

Length measurements of 738 Redfish *marinus* individuals (359 males and 379 females) were conducted in Div.2J in February.

These indicated that during the period in question, redfish catches consisted of males 23-41 cm in length (mean length 29.1 cm) and females 23-46 cm in length (mean length 29.6 cm). There was a predominance of individuals 28-30 cm in length among both males and females.

#### Greenland halibut

In 1976, catches of Greenland halibut from SA2 amounted to 2,674 tons, of which 1,387 tons were from Div.2H and 1,283 tons from Div.2J. As compared with the 3,700 tons taken in 1975, Polish catches of Greenland halibut <sup>(dropped)</sup> in 1976 due to a lower catch quota for that year and the substantial concentration of catches of the species from Div.3K during the winter and spring.

In Div.2HJ, Greenland halibut was mainly caught during the period from June to October (Table 6).

No biological studies ~~on Greenland halibut~~ were carried out in SA2, in 1976.

#### Witch

Polish catches of witch from SA2, dropped from 542 tons in 1975 to 402 tons in 1976. This species was caught in Div.2HJ, where 201 tons were taken from each sector.

Witch was caught in Div.2H in August and September, and in Div.2J - in January and February, also from June to October (Table 7).

No biological studies were carried out on witch from SA2 in 1976.

#### Capelin

Capelin catches by the Polish fisheries from SA2 dropped from 20,267 tons in 1975 to 9,381 tons in 1976. This species was taken from Div.2H - 5,648 tons and Div.2J - 3,733 tons.

In Div.2H, capelin was fished in August, September and October, and in Div.2J - from June to October. In both Divisions, the greatest quantities were taken in September (Table 8).

No biological studies were carried out on capelin from SA2.

SUBAREA 3

Status of the fisheries

In 1976 - as in previous years - Polish trawlers mainly fished in Div.3K of SA3, much less fish was taken from Div.3LMN. Altogether, 33,156 tons were taken from SA3 in 1976, which was 26.7% greater than the 26,159 tons taken in 1975.

The main component of catches using bottom trawls, in 1976, was cod. Witch, Greenland halibut and redfish were of much less importance. There were only small quantities of such species as American plaice, roundnose grenadier, mackerel, wolffishes, herring, Atlantic halibut and others.

Bottom fishing was conducted in Div.3K from January to June as well as in October, November and December. In Div.3L, fishing was only carried out in certain months, mainly in March, and in Div.3M - January, February and March.

Fishing by means of pelagic otter trawl was mainly for capelin. This was conducted in Div.3LN from May to August.

Table 9 gives the composition of Polish catches from SA3 in 1976, according to species and Divisions.

Cod

In 1976, Polish cod catches from SA3 amounted to 16,912 tons whereas the figure for 1975 was only 8,502 tons. This species was mainly taken from Div.3K (14,314 tons) last year, with much less caught in Divs. 3L and 3M.

The main cod catches from Div.3K in 1976, were obtained during the period from January to May (13,882 tons). No cod fishing was conducted in this Division in July, August and September. In Div.3L it was fished mainly in March and in Div.3M - in January February and March (Table 4).

Biological research on cod was carried out in Divs.3K and 3L in 1976. In Div.3K, 9,114 individuals were measured in February and April and 720 were aged. In Div.3L, 627 individuals were measured and 100 aged in March.

These investigations indicated (Table 10) that cod of 30-101 cm (mean length 53.7 cm) aged 3-14 was caught in Div.3K in

February. The basic catches consisted of individuals 39-65 cm in length of 4-8 (1972-1968 year classes). In April, much larger cod was caught, i.e. 39-125 cm in length (mean length 71.5cm) with a predominance of 63-68 cm., which most probably constituted 8-year-olds of the fertile 1968 year class (no otoliths were examined to determine age in Div.3K in April).

Cod ranging from 39 to 83 cm (mean length 56.7 cm) was taken from Div.3L in March, the age being from 4 to 14, with a predominance of 5-year-olds in the 51-62 cm length range (Table 10).

### Redfish

In SA3, Polish redfish catches dropped from 3,296 tons in 1975 to 2,985 tons in 1976. Redfish was mainly caught in Div.3K (2,874 tons), a total of 111 tons of the species having been taken from Div.3LM.

In 1976, redfish was caught throughout the whole year, with the exception of summer, mainly, however, from January to March and in December (1,772 tons).

In February and April, 1976, 2,998 Redfish mentella were measured in Div.3K (1,069 males and 1,929 females), 4,292 in Div. 3L (2,096 males and 2,196 females), also 1,005 redfish marinus in Div.3K (535 males and 470 females).

Redfish mentella males 22-56 cm in length (mean length 35.4 cm) and females 23-60 cm in length (mean length 38.6 cm) were caught in Div.3K in February. The major part of the catches however, constituted males 27-42 cm in length and females 30-36 cm in length. In April, catches constituted males 25-39 cm in length (mean length 32.7 cm) and females 27-50 cm in length (mean length 38.5 cm), mainly 30-36 cm (males) and 33-44 cm (females) in length.

Catches of redfish marinus from Div.3K in February, constituted individuals 21-42 cm in length (mean lengths: males 29.2 cm, females 28.8 cm), with a predominance of 25-29 cm length groups. In April the length of males taken was 23-37 cm (mean 30.3 cm) that of females - 25-34 cm (mean 29.2 cm), with a predominance of males 30-48 cm and females 27-31 cm.

Greenland halibut

Polish catches of Greenland halibut taken from SA3 dropped from 4,747 tons in 1975 to 3,268 tons in 1976. This species was mainly caught in Div.3K (3,232 tons) and in small quantities in Div.3L (36 tons).

In Div.3K, the main catches were achieved in the first half of the year and in December (Table 6).

In 1976, length measurements of Greenland halibut were made in Div.3K only, in March and April, when a total of 7,731 individuals was measured, these including 3,421 males and 4,310 females.

This indicated that the length range of males was 33-68 cm (mean 46.8 cm), that of females - 40-66 cm (mean 54.4 cm). The prevailing length classes were: males - 40-56 cm, females - 40-66 cm.

A relationship between the length and weight of Greenland halibut examined in Div.3K was calculated using the formula:

$$W = n \cdot L^k$$

It was calculated that (A.Kosior):  $W_{\sigma} = 0.00180 L^{3.3951}$ ,  
 $W_{\varphi} = 0.00374 L^{3.3669}$ .

Witch

Polish catches of witch from SA3 dropped from 4,041 tons in 1975 to 3,268 tons in 1976. These originated mainly from Div. 3K where 3,431 tons were taken and in small quantities from Div. 3L (196 tons).

Polish trawlers fished for witch in Div. 3K from January to May - the greatest quantity being in April: 1,223 tons, also in October, November and December. In Div.3L, this species was caught almost exclusively in March (Table 7).

Biological studies of witch were carried out in Div.3K in February and April, during which 4,581 individuals were measured (1,921 males and 2,610 females) and 500 aged.

Witch catches in February consisted of males 32-60 cm in length (mean length 42.1 cm) of the 5-18+ age group, and females of the 5-20+ age group, 32-66 cm in length (mean 45.7 cm). There

was a prevalence of fish of the 35-45 cm., 9-year-old age group among both males and females (Table 11).

The witch caught in April were larger and older than those taken in February. The length and age groups were: males - 34-56 cm (mean 48.5 cm) 5-18 years old; females - 35-70 cm (mean 56.9 cm) 6-20+ years old. Among the males, the prevailing groups were 39-52 cm in length, aged 12-15; among the females - 47-60 cm, 15-20+ years old (Table 11).

A relationship was calculated (A.Kosior) for the length and weight of witch from Div.3K:  $W_{\text{♂}} = 0.00835 L^{3.6232}$ ,  $W_{\text{♀}} = 0.00678 L^{3.4664}$ .

#### Capelin

Polish catches of capelin from SA3 increased from 4,608 tons in 1975 to 5,740 tons in 1976. Of this, 3,778 tons were caught in Div.3N, 1,113 in Div.3K and 849 in Div.3L.

The capelin from Div.3K was only caught in October, that from Div.3L and 3N - from May to August, mainly in July (Table 8).

No biological studies were carried out on capelin in 1976.

#### SUBAREA 4

##### Status of the fisheries

In SA4, Polish catches amounted to only 814 tons in 1976, these originating from Subdiv.4VS. These catches constituted 809 tons of Squid *Illex* and 5 tons of various species of fish.

No biological studies were carried out in SA4 in 1976.

#### SUBAREAS 5 and 6

##### Status of the fisheries

As in preceding years, the activities of Polish fisheries in SA5 in 1976, were mainly concentrated in Subdivision 5Ze, where the predominant catches were herring and mackerel. These two species constituted more than 80% of the catches from SA5, the share being about 10% less than in 1975. The proportion of other species in catches was duly higher. Squid *Illex* constituted 10% of the catches (Table 12), i.e. an increase of 6%. Among the remaining species whose share was greater than 2%, were butterfish,

sea robins and other non-identified species. Such species as cod silver hake, alewife, pollock and bluefin tuna occurred in small quantities and as incidental by-catch only.

In SA6, the bulk of the catches was taken from Div.6B during the first quarter of the year. More than 80% of the catches from this area constituted mackerel (Table 13). Squid Loligo, catches of which amounted to about 5% of the total, was mainly fished in the first quarter of the year, the quantity taken being only about one third that of 1975. A rapid drop was observed in spring catches of herring and this should be attributed to a large extent to conservation measures implemented during the period. Herring together with such species as searobins, butterfish, cod and others, constituted only by-catch in the mackerel fishery.

#### Mackerel

Polish mackerel catches from SA5 and 6 in 1976 amounted to 51,504 tons, which was 22,777 tons less than the 1975 catches. This decrease can be attributed, to a substantial degree, to a decline observed in the catch per unit of effort during the period from March to April. The best season for mackerel extended, as usual, from January to May and continued in the last two months of the year, during which 91.6% of the total catch of this species was taken. As opposed to the spatial distribution of catches in 1975, the bulk of the 1976 mackerel catches (about 60%) came from SA5.

The high abundance of 1974 and 1973 year classes was confirmed by their share in the age composition of commercial catches which amounted to 33.7% and 31.0% by numbers respectively (according to S.Uciński). A peculiar feature of the 1976 age composition was the low share of age-group 1 - about 1.3% only (Table 15), whereas in 1975, one-year-old fish constituted 22.6% of the total Polish mackerel catches. This may have been partly due to the introduction of size limits in 1976, as well as to the greater concentration of fishing fleets involved in areas where more abundant age-groups prevailed.



In 1976, length measurements covered 39,525 fish, 4,101 specimens having been collected from both commercial and research catches for age determination.

### Herring

Herring catches in 1976 totalled 10,517 tons, thus equalling the allotted quota. As usual, the greatest catches of 8,411 tons (80%) were taken during the spawning period from September to October, in Subdivision 5Ze. As opposed to previous years, the bulk of the catches was taken in September, in 1975 and 1976.

There was a substantial drop in catch per unit of effort in the Georges Bank area. A somewhat better CPUE was observed in Nantucket Shoals, but this was also lower than the 1975 results. Insignificant herring catches during the first half of the year were connected with the ICNAF regulation forbidding a greater daily herring by-catch than 7.5% by weight, which caused fleets to refrain from herring fishing and concentrate on mackerel.

Similar to previous years, the age composition of commercial herring catches (according to M.Giedz) showed a significant prevalence of the very abundant 1970 year class - 87.1%. The percentage share of 1973 and 1972 year classes was very low and the average in both cases was not higher than 3.2%, (Table 17). However, during the springtime, 3- and 4-year-old fish were much more abundant, e.g. in May, when they constituted about 26% of the catches.

3,872 specimens were taken from survey and commercial catches for measuring and 942 for age readings.

### Squid

The total catches of squid in SA5 and 6 amounted to 7,565 tons of which 5,050 from SA5 and 809 from Subdivision 4Vs constituted Illex. The bulk of these catches was taken in March and April. The catches of 1,706 tons from SA6 consisted of Loligo, the fishing having taken place during the first and last quarters of the year (Table 18). The highest CPUE was achieved from May to June. B-29 and B-18 freezer-trawlers using only pelagic gear, were employed in this fishery.

The collecting of biological data on these species, was carried out on board R.v. "Wieczno" (May and November) and M/t. "Kaszalot" (June-August and October). The mean mantle length of *Illex* in May, ranged from 15-18 cm. The participation of juveniles was relatively higher than in previous years, being up to 6.1% of the samples collected. The average mantle length increased gradually to reach 25-26 cm., in November.

The prevailing mantle length of *Loligo* ranged from 4-10 cm in May. A few modal length classes were encountered in November: 5-6 cm., 10 cm and 14 cm. ML, the abundance of which decreased in that order respectively.

21,138 specimens of *Loligo pealei* and 49,980 *Illex illecebrosus* were collected for length measurements. 1,186 specimens were subject to more detailed biological studies.

#### Other finfish

The only objects of directed fisheries by the Polish fishing fleet in SA5 and 6, were mackerel, herring and squid. All other species were taken as incidental by-catch and amounted to 5,681 tons. This was not more than 7.6% of the total catch from these subareas (Tables 12 and 13). About 40% of the total quantity of other finfish were non-identified species. Of the remaining part, the most abundant were sea robins and butterfish, each constituting about 27% of the by-catch species. Catches of such other species as cod, silver hake, pollock, dogfish, alewife and bluefin tuna were insignificant (see Tables).

#### Special Research Studies

##### Environmental studies.

In 1976, the Sea Fisheries Institute's r.v. "Wieczno" conducted two survey cruises in the IENAF Area. The first cruise took place in April and May in Div.5Z and 6A, the second - in October and November, in Div.5Z. Specialists from NMFC in Woodhole (USA) participated in the cruises. The investigations conducted covered hydrographic, plankton (phytoplankton and larval herring) and groundfish studies (GSP). During the second cruise hydroacoustic studies and Blue shark tagging was also conducted.

Table 1. Polish catches in the ICNAF SA 1-5 and Statistical SA 6 broken down by species in 1976 and 1975

Species	1976		1975	
	metric tons	%	metric tons	%
Mackerel	51 549	41.1	74 281	39.6
Herring	10 539	8.4	38 463	20.6
Capelin	15 121	12.0	24 875	13.3
Cod	20 403	16.3	16 384	8.7
Greenland halibut	5 942	4.8	8 447	4.5
Atlantic halibut	16	+	-	-
Witch	4 029	3.2	4 583	2.4
Redfish	4 061	3.2	4 470	2.4
Butterfish	1 518	1.2	3 754	2.0
Roundnose grenadier	101	0.1	1 499	0.8
American plaice	138	0.1	632	0.3
Silver hake	215	0.2	384	0.2
Pollock	25	+	17	+
Searobins	1 521	1.2	852	0.5
Wolffishes	29	+	21	+
Bluefish			19	+
Alewife	14	+	62	+
Dogfish	58	+	115	0.1
Bluefin tuna	3	+	-	-
Squid Loligo	1 706	1.3	3 785	2.0
Squid Illex	5 859	4.7	3 051	1.6
Sea breams	-		256	0.1
Other Finfish in SA 2-4	404	0.3	164	0.1
Other Finfish in SA 5-6	2 237	1.8	1 533	0.8
<b>Total</b>	<b>125 488</b>	<b>99.9</b>	<b>187 647</b>	<b>100.0</b>

Table 2. Polish catch quota and catches in 1975  
in ICNAF Area

Species	Stocks Divisions	Catch quotas for 1976	Catches in 1976	Percent catches as to the quota
Cod	2GH	4500	922	20.49
	2J+3KL	18 500=	18 493	99.96
	3M	1 460	898	61.51
	5Z	457	88	19.26
Redfish	2+3K	4 000	3 950	98.75
Witch	2J+3KL	4 600	4 029	87.59
Greenland halibut	2+3KL	6 000-	5 942	99.03
Herring	5Z+6	11 000=	10 517	95.61
Mackerel	5+6	78 300-	51 504	65.78
Squid Illex	3+4	3 000	804	26.80
	5+6	5 000	5 050	
Squid Loligo	5+6	1 700	1 706	100.35
Other Finfish	5+6	10 000	5 353	53.53

Table 3. Polish catches in SA 2 broken down by species  
and Divisions, in 1976  
/in metric tons/

Species	Subarea 2			Total
	2G	2H	2J	
Cod	11	911	2 479	3 401
Redfish		668	408	1 076
Greenland halibut	4	1 387	1 283	2 674
Witch		201	201	402
American plaice		25	32	57
Roundnose grenadier		1	32	33
Capelin		5 648	3 733	9 381
Wolfishes			6	6
Other Finfish			30	30
Total	15	8 841	8 204	17 060

Table 4. Polish cod catches in SA 2 and 3 in 1976  
/in metric tons/

Divisions	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
2G								11					11
2H								186	148	577			911
2J	1192	614				44	131	181	304	13			2 479
3K	670	7530	2782	1904	996	7				57	159	209	14 314
3L	6		1625	69									1 700
3M	311	487	100										898
Total	2179	8631	4507	1973	996	51	131	378	452	647	159	209	20 313

Table 5. Polish Redfish catches in SA 2 and 3 in 1976  
/in metric tons/

Divisions	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
2H						10	5	152	175	326			668
2J	112	44				41	1	31	159	20			408
3K	968	345	785	175	118	24				5	180	334	2 874
3L			81										81
3M			30										30
Total	1020	389	896	175	118	75	6	183	334	351	180	334	4 061

Table 6. Polish Greenland halibut catches in SA 2 and 3 in 1976  
/in metric tons/

Divisions	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
2G								4					4
2H						436	134	370	296	151			1 387
2J	53	14				387	578	4	199	48			1 283
3K	668	77	425	641	428	446	-	1			546		3 232
3L	16		19	1									36
Total	737	91	444	642	428	1269	712	379	495	199	546		5 942

Table 7. Polish Witch catches in SA 2 and 3 in 1976  
/in metric tons/

Divisions	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
2H								162	39				201
2J	38	31				12	11	162	48	19			201
3K	219	187	678	1223	111	7		2		213	234	557	3 431
3L	4		180	12									196
<b>Total</b>	<b>261</b>	<b>218</b>	<b>858</b>	<b>1235</b>	<b>111</b>	<b>19</b>	<b>11</b>	<b>206</b>	<b>87</b>	<b>232</b>	<b>234</b>	<b>557</b>	<b>4 029</b>

Table 8. Polish Capelin catches in SA 2 and 3 in 1976  
/in metric tons/

Divisions	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
2H								1098	3191	1359			5 648
2J						201	485	359	1701	987			3 733
3K										1113			1 113
3L					75	160	465	149					849
3N					250	1213	1964	351					3 778
<b>Total</b>					<b>325</b>	<b>1574</b>	<b>2914</b>	<b>1957</b>	<b>4892</b>	<b>3459</b>			<b>15 121</b>

Table 9. Polish catches in SA 3 broken down by species and Divisions in 1976  
/in metric tons/

Species	Subarea 3				Total
	3K	3L	3M	3N	
Cod	14 314	1 700	898		16 912
Redfish	2 874	81	30		2 985
Greenland halibut	3 232	36			3 268
Atlantic halibut	16				16
Witch	3 431	196			3 627
American plaice	61	5	15		81
Roundnose grenadier	68				68
Capelin	1 113	849		3 778	5 740
Wolffishes	22	1			23
Mackerel	45				45
Herring		22			22
Other Finfish	278	75	16		369
<b>Total</b>	<b>25 454</b>	<b>2 965</b>	<b>959</b>	<b>3 778</b>	<b>33 156</b>

Table 10. Percentage Age Composition of Polish cod catches in Div. 3K and 3L in 1976

Divisions	Months	Year - classes and age groups													Total %
		1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	
		3	4	5	6	7	8	9	10	11	12	13	14	15	
3K	Feb.	5.5	12.9	17.6	17.1	16.2	18.5	7.7	3.4	0.4	0.6		0.1		100.0
3L	March		14.6	29.7	18.7	19.4	10.8	5.0	1.6	0.1			0.1		100.0

Table 11. Percentage Age Composition of Polish Witch catches in Div. 3K in 1976

Divisions	Months	Sex	Year - classes and age groups											Total %	
			1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961		1960+
			5	6	7	8	9	10	11	12	13	14	15		15+
3K	Feb.	♂		4.5	6.8	9.4	16.5	12.5	12.8	10.1	6.4	8.1	8.4	4.4	99.9
		♀	1.0	9.5	6.9	4.8	18.0	11.8	5.8	3.6	2.4	3.2	8.0	24.9	99.9
	Apr.	♂	0.1	1.5	3.4	5.4	5.6	4.0	6.0	11.8	12.0	17.7	13.6	18.9	100.0
		♀		1.1	2.9	1.7	6.3	6.5	3.9	2.2	5.7	8.3	8.6	52.8	100.0

Table 12. Polish catches in SA 5 broken down by species and Divisions, in 1976  
/in metric tons/

Species	Subarea 5		Total
	52e	52w	
Mackerel	20 735	9 899	30 634
Herring	10 210	216	10 426
Cod	71	17	88
Silver hake	102	113	215
Pollock	20	5	25
Butterfish	664	392	1 056
Dogfish	53	5	58
Squid Illex	4 603	447	5 050
Squid Loligo	394	92	486
Sea robins	634	380	1 014
Bluofin tuna	3		3
Alewife	14		14
Other Finfish	1 267	185	1 452
<b>Total</b>	<b>38 770</b>	<b>11 751</b>	<b>50 521</b>



Table 13. Polish catches in Statistical SA 6 broken down by species and Divisions, in 1976  
/in metric tons/

Species	Subarea 6		Total
	6A	6B	
Mackerel	6 408	14 462	20 870
Herring	58	33	91
Cod	2		2
Sea robins	187	320	507
Butterfish	140	322	462
Squid Loligo	696	524	1 220
Other Finfish	257	528	785
<b>Total</b>	<b>7 748</b>	<b>16 189</b>	<b>23 937</b>

Table 14. Polish Mackerel catches in SA 5 and 6 in 1976  
/in metric tons/

Subarea	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
5Ze	2	2377	3503	3278	3789	425	1436	78	399	1972	3192	284	20 735
5Zw		1842	2504	567							1297	3689	9 899
6A	1485	1777	39	87								3020	6 408
6B	11374	1658										1430	14 462
<b>Total /3+5+6/</b>	<b>12861</b>	<b>7654</b>	<b>6046</b>	<b>3932</b>	<b>3789</b>	<b>425</b>	<b>1436</b>	<b>78</b>	<b>399</b>	<b>1972</b>	<b>4489</b>	<b>8423</b>	<b>51 504</b>

Table 15. Age Composition of Polish Mackerel catches in SA 5 and 6 in 1976  
/by numbers/

Year - classes	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	Total /x 10 <sup>3</sup> /
Age - groups	0	1	2	3	4	5	6	7	8	9	10+	
No.		2050	53694	49492	14626	10314	5870	7849	8595	4564	2248	159 302
%		1.3	33.7	31.0	9.2	6.5	3.7	4.9	5.4	2.9	1.4	100.0

Table 16. Polish Herring catches in SA 5 and 6 in 1976  
/in metric tons/

Subarea	M o n t h s												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
5Ze		12	6	24				422	5249	3162	1333	2	10 210
5Zw		35									77	104	216
6A		30										28	58
6B	22	11											33
Total	22	88	6	24				422	5249	3162	1410	134	10 517

Table 17. Age Composition of Polish Herring catches in SA 5 in 1976  
/by numbers/

Year - classes	1974	1973	1972	1971	1970	1969	1968		Total /x 10 <sup>3</sup> /
Age groups	2	3	4	5	6	7	8	9+	
No.		909	569	2236	39066	1118	747	376	45 021
%		2.0	1.2	4.9	87.1	2.4	1.6	0.8	100.0

Table 18. Polish Squids catches in SA 4,5 and 6 in 1976  
/in metric tons/

Species	Subarea	M o n t h s												Total
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Squid Illex	4Vs							397	412					809
	5Z	79	106	2086	1497	741	150	339	52					5 050
Total		79	106	2086	1497	741	150	736	464					5 859
Squid Loligo	5Z			302	11		5	72				96		486
	6A	67	322										307	696
	6B	524												524
Total		591	322	302	11		5	72				96	307	1 706