

DEMERSAL FISH (NORTHERN) COMMITTEE

by

R. Jones

1976

Belgium

(R. de Clerck)

The determination of the density per year class of soles, plaice, dab, flounder and gadoids along the Belgian coast has been continued on the RV "Hinders".

Two cruises were carried out for the demersal young fish survey in collaboration with the Netherlands and Germany.

The market sampling was continued covering cod (North Sea), whiting (North Sea), haddock (North Sea), plaice (North Sea - English Channel - Bristol Channel - Irish Sea), sole (North Sea - English Channel -Bristol Channel and Irish Sea)

Sampling

species	season	No. of samples		No. of samples	
		research vessel	market samples	measured	aged
<u>Sole</u>	1	-	7	717	210
	IV	-	12	1326	210
	3	-	12	1447	210
	4	-	9	1012	210
<u>VIIIf</u>	1	-	13	1638	210
	2	-	5	428	210
	3	-	5	553	140
	4	-	9	973	210
<u>VIIa</u>	1	-	4	512	210
	2	-	9	1078	210
<u>VIIId, e</u>	1	-	4	357	210
<u>Plaice</u>	1	-	6	348	150
	IV	-	12	658	150
	3	-	12	838	150
	4	-	8	469	140
<u>VIIIf</u>	1	-	25	1582	280
<u>VIIa</u>	1	-	5	314	150
	2	-	3	192	-
<u>VIIId, e</u>	1	-	4	228	150

species	season	Number of samples			
		research vessel	market samples	measured	aged
<u>Cod</u>	1	-	8	327	270
	2	-	6	263	263
	3	-	6	240	240
	4	-	7	260	260
<u>Whiting</u>	1	-	7	327	270
	2	-	6	115	115
	3	-	5	160	160
	4	-	7	140	140

Canada  
(P. F. Lett)

Sampling data and research activities relative to demersal fish have been reported to ICNAF.

Denmark  
(H. Knudsen)

The RV "Dana" took part in the Young Fish Survey in the North Sea in February and in the International Young Gadoid Survey in June.

Sampling

Species, Area	Season	No of samples		No of fish	
		Research vessel	Market	Measured	Aged
Cod	1	-		684	205
North Sea IV	2	-		1198	472
	3			3965	932
	4	-		537	35
	1	-	2	141	141
Kattegat III a	2	-	2	113	113
	3	-	1	94	94
	4	-	3	189	189
	1	-	55	318	318
Haddock	2	-	17	43	43
	3	-	25	129	129
	4	-	57	286	286
	1	-	9	52	52
North Sea IV	2	-	3	25	25
	3	-	44	461	461
	4	-	35	146	146
	1	-			
Skagerrak-Kattegat III a	2				
	3				
	4				

Species, Area	Season	No of samples		No of fish	
		Research vessel	Market	Measured	Aged
Whiting	1	-	77	113	113
North Sea IV	2	-	36	157	156
	3	-	41	318	318
	4	-	91	943	943
Skagerrak-Kattegat III a	1	-	17	461	461
	2	-	14	82	82
	3	-	54	2190	2190
	4	-	61	1690	1690
Norway Pout	1	-	50	5613	4983
North Sea IV	2	-	24	2724	2723
	3	-	19	1680	1680
	4	-	47	4805	4805
Skagerrak-Kattegat III a	1	-	9	953	953
	2	-	6	718	718
	3	-	23	2027	2027
		-	29	1767	1767
Plaice	1	-	1	193	193
North Sea IV	2	-	2	398	398
	3	-	3	523	523
	4	-	1	171	171
Kattegat III a	1	-	1	135	135
	2	-	2	353	353
	3	-	3	276	276
	4	-	6	481	481
Sole	2	-	-	2023	540
North Sea IV					

Finland  
(M. Pettersson)

No work done on demersal fish other than that reported to the Baltic Fish Committee.



France

(G. Lefranc)

Travail au Laboratoire

Les recherches en laboratoire sont surtout orientées vers la collecte des données nécessaires aux Groupes de travail chargés de calculer les prises maximales autorisées de morue, de lieu noir, de merlan, d'églefin, de plie et de sole dans les secteurs du N.E. Atlantique définis par le CIEM; les données recherchées sont les tonnages débarqués par secteur, l'effort de pêche correspondant, les compositions en taille et en âges des apports ainsi que l'élaboration de clés taille/âge, poids/âge et de relations taille/poids.

Travail en Mer

La "Thalassa" a participé en 1976 à deux campagnes qui s'inscrivent dans le cadre des études internationales nécessaires à la connaissance de l'abondance du recrutement des nouvelles classes d'âge, base des estimation de stocks et de leur gestion rationnelle

- a) du 11 février au 2 mars : "International Young Herring Survey"  
avec collecte de données sur la morue, le merlan, l'églefin et le tacaud norvégien.
- b) du 1er au 10 juin: Inventaire des gadidés du groupe 0 autour des Féroés.

Une prospection des fonds chalutables du seuil Islando-féringien et du Banc Hatton avec recherche des concentrations de poissons de profondeur susceptibles d'intéresser les pêcheurs français a été réalisée entre le 10 juin et le 5 juillet.

Echantillonnage Morue

Saison 1976	Région	No. d'échantillons		Nombre de Poissons mesurés	Nombre d'otolithes prélevés
		Bateau de Recherche	Marché		
1er trim.	IVa	15	-	368	217
	IVb	26	-	547	448
	IVc	9	-	446	160
	VIIIf	-	1	96	-
	VIIig	-	1	88	-
2ème trim.	VIIa	4	-	93	-
	Vb	37	-	7 584 <sup>x)</sup>	-
	VII	-	6	110	-
3ème trim.	VII	-	3	28	-
	IVa	-	1	54	-
4ème trim.	VII	-	1	7	-
	VIIa	-	3	337	-
	VIIIf	-	1	55	-
	VIIig	-	1	60	-
	<u>Merlan</u>				
1er trim.	IVa	17	-	1 679	65
	IVb	25	-	4 207	315
	IVc	11	-	2 413	140
	VII	-	2	54	-
	VIIa	-	3	768	121
2ème trim.	IVc	2	-	57	-
	VIIa	-	2	556	-

<sup>x)</sup> larves

## Merlan (continué)

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Saison 1976	Région	No. d'échantillons		Nombre de Poissons mesurés	Nombre d'otolithes prélevés
		Bateau de Recherche	Marché		
3ème trim.	IVc	3	-	102	-
	VII	-	3	106	
	IVc	2	-	687	-
	VIIa	-	1	201	-
	VII	-	9	436	-
	VIIa	-	1	115	-
	VIIIf	-	1	230	-
	VIIg	-	2	362	-
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<u>Eglefin</u>					
1er trim.	IVa	16	-	1 791	206
	IVb	14	-	1 446	241
	VIIa	-	1	31	-
	VII	-	1	54	-
	VIIb	-	1	30	-
	VIIIf	-	1	50	-
	VIIa	9	-	1 239	-
	Vb	11	-	766 <sup>x)</sup>	-
2ème	VII	-	2	40	-
	VIIa	-	1	117	-
	VII	-	2	43	-
	VIIIf	-	1	51	-
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<u>Lieu Noir</u>					
1er trim.	IVa	2	-	119	119
	Vb	-	1	92	-
	VIIa	-	1	413	-
	VII	-	10	207	-
	VIIa	7	-	1 032	123
	Vb	18	-	1 751 <sup>x)</sup>	-
	VII	-	1	18	-
	VII	-	2	40	-
2ème	IVa	-	1	68	-
	VIIa	-	2	255	-
	VII	-	2	46	-
	VII	-	2	46	-
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<u>Merlan Bleu</u>					
2ème	Va	4	-	338	-
	Vb	6	-	434	-
	VIIa	5	-	342	-
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<u>Merlu</u>					
2ème trim.	VIIa	5	-	89	-
	VII	13	3	1 225	69
3ème trim.	VII	-	1	116	-
4ème trim.	VII	-	3	374	-
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<u>Tacaud Norvégien</u>					
1er trim.	IVa	16	-	1 935	70
	IVb	2	-	199	51
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<u>Lingue Franche</u>					
2ème trim.	VIIa	8	-	88	-

<sup>x)</sup> larves

Saison 1976	Région	No. d'échantillons		Nombre de Poissons mesurés	Nombre d'Otolithes prélevés
		Bateau de Recherche	Marché		
2ème trim.	Va	4	-	75	-
	Vb	5	-	70	-
<u>Sébaste</u>	Va	3	-	240	-
	Vb	7	-	278	-
<u>Grondin gris</u>	VIa	2	-	134	-
	IVc	7	-	630	66
1er trim.	IVb	4	-	79	-
	VIIIf	-	1	120	-
2ème trim.	IVc	2	-	415	124
	VIIId	-	3	330	330
3ème trim.	IVc	3	-	418	198
	VIIId	-	3	165	165
4ème trim.	IVc	2	-	172	84
	IVb	1	-	29	-
1er trim.	IVc	1	-	47	3
2ème trim.	IVc	2	-	1 440	89
3ème trim.	IVc	3	-	593	159
	IVc	2	-	97	75
<u>Limande</u>	IVb	5	-	510	-
	IVc	7	-	1 046	-
2ème trim.	IVc	2	-	426	-
	IVc	3	-	1 062	-
<u>Flet</u>	IVb	1	-	31	-
	IVc	1	-	252	-
2ème trim.	IVc	2	-	252	-
	IVc	3	-	747	-
<u>Flétan Noir</u>	Va	3	-	57	-
	Vb	5	-	143	-

German Democratic Republic  
(W. Mahnke and P. Ernst)

Sampling Data

Area	Season	No. of Samples		No. of Fish		
		Research Vessels	Market	Measured	Aged	Racial Investig.
<u>COD</u>						
IIa	3	-	37	7 889	2 185	-
IIb	4	-	32	10 002	1 599	-
<u>REDFISH (S. marinus)</u>						
IIa	1	8	-	1 553	249	-
	3	-	2	635	82	-
I	3	-	2	494	99	-
<u>REDFISH (S. mentella)</u>						
IIa	2	-	25	2 015	244	-
	3	-	3	544	120	-
IIb	3	-	2	100	95	-
<u>GREENLAND HALIBUT</u>						
IIa	3	-	2	396	100	-
IIb	3	-	20	3 167	1 000	-
<u>SAITHE</u>						
IVa	1	47	-	11 294	3 357	-
	2	-	2	451	259	-
	3	14	1	2 700	1 446	150 <sup>x)</sup>
IIa	1	15	10	4 472	1 672	150 <sup>x)</sup>
	3	-	3	167	60	-

x) Samples of organs of saithe were taken for biochemical investigations. Parasitological investigations of saithe (West Coast of Norway) and of Greenland Halibut (Bear Island) were carried out.

Tagging: No tagging experiments were carried out in 1976.

Research Vessel Surveys

Area	Dates	Objectives
West of Norway (Røst to Svinøy) Northern North Sea	3 Feb - 31 Mar 1976	Saithe, Redfish, Cod
Northern North Sea	27 Aug - 2 Oct 1976	Herring larvae, adult saithe, gadiformes

Germany, Federal Republic of  
(G. Wagner)

Sampling Data

COD

Area	Season	No. of Samples		No. of Fish		
		Research Vessels	Market Samples	Measured	Aged	Racial Invest.
BAR I	III	21		1805	1169	48 (weighted)
NORWG IIa	I		4	1201	422	
	II		2	518	320	
	III	4		176	123	
SPITS IIb	III	20		1709	1023	
N-NOR IVa	I	33		277	216	
	II	8		1282		
	III	15		1062		
C-NOR IVb	I	46		13733	1644	
	III	6		403		
	IV	107		18002	5273	
S-NOR IVc	I	15		1389	940	
IVa + IVb	III	1		1810		
ICE Va	I		3	527	387	
	II		2	498	245	
	III	42		123		
	IV		3	975	507	
SC-IR VIa	III	5		69	42	
E-GRN XIV	I		3	1323	551	
	II		2	376	239	

HADDOCK

BAR I	III	1		61	
NORWG IIa	I		4	1070	537
	II		1	370	134
	III	2		142	74
SPITS IIb	III	8		622	309
N-NOR IVa	I	25		4703	1297
	II	6		1122	155
	III	9		1592	361
IVa+ IVb	III	1		1499	
C-NOR IVb	I	6		1710	110
	III	2		195	

continued

HADDOCK (ctnd)

Area	Season	No. of Samples		No. of Fish			
		Research Vessels	Market Samples	Measured	Aged	Racial Invest.	
ICE Va	I	42	3	640	381		
	II		1	346	169		
	III			2491			
	IV		1	179	179		
SC-IR VIa	III	3		458	360		
E-GRN XIV	IV		1	191	191		
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REDFISH	<u>(Sebastes marinus = S. marinus)</u> <u>(Sebastes mentella = S. mentella)</u>						
BAR+SPITS I + IIb	<u>S.marinus</u>	10					
	<u>III</u>			3833	1928		
NOR IIa	<u>S.mentella</u>	11					
	<u>III</u>			4454	2206		
NOR IIa	<u>S.marinus</u>	4					
	I		6	1616	300		
	II		5	1924	500		
	III		2	500	500		
SPITS IIb	IV	4		928	928		
	III			1513			
SPITS IIb		9		2029	2029		
ICE Va	<u>S.mentella</u>	10					
	I		10	2428	200		
	II		10	2621	500		
	III		13	3876	505		
	IV		15	3012	100		
FARPL Vb	<u>S.marinus and S.mentella</u>						
	<u>III</u>		42	4263			
FARPL Vb	<u>S.mentella</u>	8					
	I		2	16813	145		
	II		1	416			
	III			419	300		
E-GRN XIV	<u>S.marinus</u>	9					
	<u>III</u>			2390	809		
E-GRN XIV	<u>S.marinus</u>	7					
	I		6	2792	856		
	III		1	1623	300		
	IV		3	200	200		
	<u>S.mentella</u>			1016			
E-GRN XIV	<u>IV</u>			1222	300		
		6		530			

SAITHE

Area	Season	No. of Samples		No. of Fish		
		Research Vessels	Market Samples	Measured	Aged	Racial Invest.
NORWG IIa	I		2	649	561	
	II		5	1726	1278	
	III		4	1410	1015	
	IV	5	2	260 733	260 733	
N-NOR IVa	I		6	1994	1002	
	II	5	1	673		
	III	6	4	409 675		
	IV	17	3	1426 10915 955	676	
ICE Va	I		11	4327	1706	
	II		14	4925	1890	
	III		5	1609	1273	
	IV	42	7	1287 1735	1202	
FARPL Vb	I		1	317	317	
	III		1	187	187	
	IV	7	1	74 245	245	
<u>WHITING</u>						
N-NOR IVa	I	17		2852		
	II	1		214		
	III	2		71		
C-NOR IVb	I	26		4417		
	III	4		867		
	IV	46		5569		
	III+IV		9	541		
S-NOR IVc	I	7		1394		
<u>PLAICE</u>						
N-NOR IVa	I	11		115		
	II	1		1		
C-NOR IVb	I	14		503	50	
	II	3	3	968	965	
	III	7	4	943 1921	407	
	IV	81	4	2041 2276 2361	607	
S-NOR IVc	I	1		1309 114	602	

SOLE

Area	Season	No. of Samples		No. of Fish		
		Research Vessels	Market Samples	Measured	Aged	Racial Invest.
I						
C-NOR IVb	I					
	II					
	IV					
TURBOT						
C-NOR IVb	I					
	II					
	III					
	IV					
BRILL						
C-NOR IVb	II					
	IV					
DAB						
C-NOR IVb	I					
	III					
	IV					
	III+IV					
FLOUNDER						
C-NOR IVb	IV					
NORWAY POUT						
N-NOR IVa	I					
	II					
POOR COD						
C-NOR IVb	IV					
WHITING POUT						
C-NOR IVb	IV					
EEL						
C-NOR IVb	III					
	IV					

LING

Area	Season	No. of Samples		No. of Fish		
		Research Vessels	Market Samples	Measured	Aged	Racial Invest.
N-NOR IVa	III	7		502		
C-NOR IVb	III	7		30		
FARPL Vb	III	7		30		
SC-IR VIa	III	4		38		
<u>HAKE</u>						
N-NOR IVa	III	4		209		

Tagging

Area	Season	Type of tags	No. tagged	Type of Fish	Recoveries
C-NOR IVb	4	Red small plastic plates fixed by nylon thread	278	eels	-

Research Vessel Surveys

Area	Date	Objectives
IVa, b	07. 1. - 28. 1.	Roundfish survey
IVa, b	08. 1. - 29. 1.	International Young Herring Survey
IVa, b, c	04. 3. - 23. 3.	Groundfish survey
IVb	28. 4. - 6. 5.	Gear experiments
IVb	10. 5. - 15. 5.	Stock assessments
IVa	08. 6. - 11. 6.	Groundfish survey (inside FLEX)
IVa, VIa	12. 7. - 21. 7.	Groundfish survey
IVb	21. 7. - 25. 7.	Gear experiments, stock assessments
IVa	26. 7. - 9. 8.	Distribution pattern of some important bottom fish species
IVa, IVb, VIa	17. 8. - 7. 9.	Groundfish survey
IVb	19. 10. - 22. 10.	" "
IVb	15. 10. - 3. 11.	" "
IVb	30. 11. - 18. 12.	" "
IVa, Va, Vb	20. 9. - 16. 10.	Gear experiment on coalfish fishery and redfish bottom trawl fisheries
Va	07. 4. - 15. 4.	Groundfish survey (redfish)
Vb	25. 8. - 15. 9.	" " "
I, IIa, IIb	15. 7. - 20. 8.	Groundfish survey

Iceland  
(J. Magnússon)

Although the research work in Iceland on demersal species of fish was continued along the same lines as in 1975, there have been some changes in the emphasis of subjects and facilities in data sampling.

The standard collection of data on landed demersal fish, mainly cod, haddock and redfish was carried out in various ports.

The research vessel "Bjarni Sæmundsson" and "Hafþór" were to a great extent engaged in work on demersal species. Besides that, two commercial stern trawlers were chartered for 10 weeks altogether. During the year, two branches of the Marine Research Institute were set up, one in the southeast (Hornafjördur) and one in the northwest (Ísafjördur) of Iceland. One was already operating in the north (Húsavík). Their main tasks are continuous sampling of data on the various fisheries and species and the tabulation of the data.

In the autumn, the Ministry of Fisheries established a team of movable fishery inspectors who go on fishing trips on all kinds of fishing vessels. Through their activities, a considerable additional amount of valuable measurements of fish becomes available to the Institute.

The investigation on the distribution of mature cod just before and during the spawning period was carried out along the same lines as in the three previous years. The investigation on the immature population of cod was greatly intensified.

The research programmes for haddock and saithe were similar to that for cod.

The redfish investigations at Iceland were considerably increased while the investigations at East Greenland were somewhat diminished except for the study of immature redfish in that area.

As to other demersal species,, the investigations were carried out in similar ways as in the previous years. It should be mentioned that, because of the increasing importance of lumpsucker, its research programme was intensified and regulations as to the control of the lumpsucker fishery were set up by the Icelandic government.

The special deep sea trawling programme implemented in 1975 was continued and the research on various deep sea species was intensified.

The number of fish sampled is shown in the following tables.

Sampling Data Cod

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-Mar.	87	40	18955	2121	
	Apr.-Jun.	136	29	12307	2616	925
	Jul.-Sept.	214	14	36074	2407	559
	Oct.-Dec.	156	21	21929	3274	1683
	Sub Total	593	104	89265	10418	3167
XIV	Jan.-Mar.					
	Apr.-Jun.	23		2475	411	377
	Jul.-Sept.	14	3	1507	700	996
	Oct.-Dec.	1		89		
	Sub Total	38	3	4071	1111	1373
	Grand Total	631	107	93336	11529	4540

Sampling Data Haddock

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-Mar.	43	5	12645	198	
	Apr.-Jun.	105	9	12260	1401	1000
	Jul.-Sept.	129	6	22776	885	1638
	Oct.-Dec.	82	7	11061	647	228
	Sub Total	359	27	58742	3131	2866
XIV	Jan.-Mar.					
	Apr.-June.	2		87		
	Jul.-Sept.	1			65	
	Oct.-Dec.					
	Sub Total	3		87	65	
	Grand Total	362	27	58829	3196	2866

Sampling Data Saithe

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-Mar.	3	3	656	202	
"	Apr.-Jun.	17	7	2657	404	
"	Jul.-Sept.	31	2	1513	294	
"	Oct.-Dec.	23		1481		
Total		74	12	6307	900	

Sampling Data Plaice

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-Mar.	22		1865	429	1015
"	Apr.-Jun.	33		684	913	1448
"	Jul.-Sept.	101	22	11573	2655	
"	Oct.-Dec.	36	6	3520	752	
Grand Total		192	28	17642	4749	2463

Sampling Data Argentina silus

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Apr.-Jun.	56		6239	300	
"	Jul.-Sept.	62		5418	211	
"	Oct.-Dec.	92		5686	482	
	Sub Total	210		17343	993	
XIV	Apr.-Jun.	8		32		
Grand Total		218		17375	993	

Sampling Data    Redfish

Area	Season	No. of samples			
		Research vessels	Market samples	Measured	Aged
<u>Sebastes marinus</u>					
Va	Jan.-Mar.	52	2	3233	
"	Apr.-Jun.	160	2	16832	100
"	Jul.-Sept.	122	1	9873	
"	Oct.-Dec.	104	1	9936	100
	Sub Total	438	6	39874	200
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XIV	Jan.-Mar.				
"	Apr.-Jun.	56		7993	300
"	Jul.-Sept.	28		3112	
"	Oct.-Dec.	7		504	
	Sub Total	91		11609	300
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	Grand Total	529	6	51483	500
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<u>Sebastes mentella</u>					
Va	Apr.-Jun.	44		4496	
"	Jul.-Sept.	30		3675	
"	Oct.-Dec.	66		5555	100
	Sub Total	140		13726	100
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XIV	Apr.-Jun.	37		2748	
"	Jul.-Sept.	9		1410	
"	Oct.-Dec.	11		483	
	Sub Total	57		4641	
-----					
	Grand Total	197		18367	100

Sampling Data Roundnose Grenadier

Area	Season	No. of samples		No. of fish	
		Research vessels	Market samples	Measured	Aged
Va	Apr.-Jun.	9		862	100
"	Jul.-Sept.	7		603	100
"	Oct.-Dec.	64		5452	652
	Sub Total	80		6917	852
XIV	Apr.-Jun.	2		8	
"	Oct.-Dec.	8		1409	
	Sub Total	10		1417	
	Grand Total	90		8334	852

Sampling Data Roughhead Grenadier

Area	Season	No. of samples		No. of fish	
		Research vessels	Market samples	Measured	Aged
Va	Apr.-Jun.	25		488	228
"	Oct.-Dec.	25		66	
	Sub Total	50		554	228
XIV	Apr.-Jun.	37		1890	174
"	Jul.-Sept.	9		670	143
"	Oct.-Dec.	12		508	102
	Sub Total	58		3068	419
	Grand Total	108		3622	647

Sampling Data Blue Ling

Area	Season	No. of samples		No. of fish	
		Research vessels	Market samples	Measured	Aged
Va	Apr.-Jun.	40		1405	119
"	Jul.-Sept.	33		1017	111
"	Oct.-Dec.	100		1805	227
	Sub Total	173		4227	457
XIV	Apr.-Jun.	18		586	
"	Jul.-Sept.	7		172	
"	Oct.-Dec.	12		82	82
	Sub Total	37		840	82
	Grand Total	210		5067	539

Sampling Data Greenland Halibut

Area	Season	No. of samples		No. of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Apr.-Jun.	57		1929	400	3526
"	Oct.-Dec.	17		131		
	Sub Total	74		2060	400	3526
XIV	Apr.-Jun	10		537	200	
"	Oct.-Dec.	14		397	200	
	Sub Total	24		934	400	
	Grand Total	98		2994	800	3526

Sampling Data Various Species

Area	Season	No. of samples		No. of fish		Tagged
		Research vessels	Market samples	Measured	Aged	
<u>Catfish (A. lupus)</u>						
Va	Jan.-Dec.	18	1	5299	2481	2064
<u>Spotted Catfish (A. minor)</u>						
Va	Mar.-Dec.	9	-	304	-	-
<u>Norway pout (Trisopterus esmarki)</u>						
Va	Apr.-Dec.	9	3	2517	1034	-
<u>Halibut (H. hippoglossus)</u>						
Va	Jan.-Dec.	18	-	1811	870	928
<u>Others</u>						
Va	Mar.-Dec.	158	-	1557	225	

Sampling Data Lumpsucker (Cyclopterus lumpus)

Va	Jan.-Mar.	3	3		220	
"	Apr.-Jun.	31	11	1867	701	
"	Jul.-Sept.	2		58		
		36	14	1925	921	

Ireland  
(J.P. Hillis)

Cod, haddock, whiting, plaice and sole were sampled at the port of landing as shown in the following Table. Approximately 200-250 otoliths were taken from larger measured samples per area per quarter. Small scale studies on discards were carried out at Killybegs (VIIa).

Plaice

Routine spring and autumn beam trawl surveys for your plaice were carried out off the east coast.

Sampling Data

Species	Area	Season	No. of samples (all market)	No. of fish measured
Cod	VIIa	1	10	562
		2	12	478
		3	11	498
		4	12	854
	VIIa	1	6	741
		2	12	583
		3	6	580
		4	12	84
	VIIb,c	1	2	109
		2	2	188
		3	1	121
	VIIg-k	2	5	114
		3	1	60
		4	3	417
Haddock	VIIa	1	16	780
		2	13	148
		3	5	614
		4	8	792
	VIIb,c	1	3	188
		2	3	204
		3	2	251
		4	2	102
	VIIg-k	2	2	148
		3	1	189
		4	7	185
Whiting	VIIa	1	3	607
		2	1	175
		3	1	208
		4	5	946
	VIIa	1	3	1 345
		2	3	627
		3	3	1 038
		4	2	691

continued

Species	Area	Season	No. of samples (all market)	No. of fish Measured
Whiting	VIIb,c	4	4	561
		3 4	6 8	905 1 274
Plaice	VIa	1	5	639
		2	6	635
		3	6	1 654
		4	6	937
	VIIa	1	2	411
		2	7	712
		3	4	653
		4	4	547
	VIIb,c	1	3	464
		2	1	299
		3	1	324
		4	3	301
Plaice	VIIg-k	1	1	202
		3	1	543
		4	4	301
Sole	VIIg-k	3 4	2 6	524 456

Netherlands  
(J.F. de Veen)

#### Work at sea

The R.V. "Tridens" made 11 cruises in the area of the Committee of which 4 were mainly devoted to work within the scope of the Demersal Fish (Northern) Committee. The corresponding numbers of cruises of the R.V. "Willem Beukelsz" were 11 and 5. The "Willem Beukelsz" made its last trip in August and was taken out of service. The R.V. "Stern" and the R.V. "Schollevaar" made together 25 cruises devoted to demersal topics in the estuaries of the Netherlands.

The R.V. "Stern", R.V. "Schollevaar", R.V. "Willem Beukelsz" and R.V. "Tridens" made one joint cruise in April and with the exception of the "Willem Beukelsz", the other ships made a joint cruise in October to analyse the stocks of juvenile sole, plaice, dab, flounder, gadoids, brown shrimp and other organisms in the nurseries of Belgium, Holland, Federal Republic of Germany and part of Denmark, in cooperation with Belgian and German research vessels.

The R.V. "Willem Beukelsz" made one cruise in May to the eastern part of the Irish Sea to analyse the stocks of juvenile fish there.

Work on fish

Plaice

The stock analysis by means of market sampling from different sub-stocks in the North Sea was continued with the emphasis on the first quarter in the spawning season. Analysis of the catches of young fish cruises (April and October) in the Southern and Central North Sea continental coasts showed that the 1975 year class is above average and the 1976 year class good. Discarding of plaice was studied together with the survival of discarded plaice.

Sole

The stock analysis by means of market sampling from different localities in the North Sea and the Irish Sea was continued. In addition, the stock in the Gulf of Biscay was sampled for stock analysis.

One cruise was devoted to the Irish Sea for census purposes.

Analysis of the catches of pre-recruit sole in the Belgian, Dutch and German coastal areas showed that the 1975 year class was better than estimated in the preceding year and the first estimate of the 1976 year class was good. The 1974 year class estimated in 1974 and 1975 to be below average turned out to be poor on recruiting to the adult stock.

Discarding of soles was studied and their survival from discarding.

Dab

No stock analysis through market sampling is possible because of the fact that landings do not reflect catches. Discarding at sea is high and sometimes all dabs caught are discarded.

During the April and October young fish cruises the age structure of the dab population in the nurseries and at sea has been analysed. 10 400 juvenile plaice have been tagged in different nurseries.

Cod

The analysis of cod stocks by means of market sampling was continued.

Cod, Haddock, Whiting

The R.V. "Tridens" participated in the ICES Young Fish Surveys in February for estimating abundance of 1-year old gadoids and in June for estimating 0-group abundance of gadoids during the pelagic phase.

## 1976 Sampling data for Plaice

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area	season	No. of samples for age determination only	Number of fish		
			research vessels	market	measured and aged
IIIa	2nd quarter	2	-	193	193
	4th "	1	1	145	75
IVb	1st quarter	-	98	7.120	7.120
	2nd "	11	10	1.418	1.418
	3rd "	-	12	821	821
	4th "	7	16	1.532	1.532
IVc	1st quarter	-	24	1.714	1.714
	2nd "	6	10	958	958
	3rd "	-	5	350	350
	4th "	4	7	671	671
VIIa	1st quarter	-	24	1.714	1.714
	2nd "	4	10	958	958
	3rd "	-	5	350	350
	4th "	4	7	671	671
Dutch Wadden sea	2nd quarter	12	12	376	376
	4th "	11	11	369	369
	Zeeland	2nd "	-	-	-
	Estuary	4th "	8	174	174
Total annually			66	183	16.390
					15.401

## 1976 Sampling data for sole.

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Area	Season	No. of samples		Number of fish measured and aged	
		for age determination only			
		research vessel	market		
IVb	1st quarter	-	12	600	
	2nd "	5	69	3.495	
	3rd "	-	8	430	
	4th "	10	16	1.010	
IVc	1st quarter	-	9	448	
	2nd "	6	48	2.500	
	3rd "	-	5	250	
	4th "	4	8	399	
VIIa	1st quarter	-	2	100	
	2nd "	4	24	1.515	
	3rd "	-	-	-	
	4th "	-	-	-	
VIII Gulf of Biscay	2nd quarter		1	50	
Dutch	2nd quarter	6	64	-	
Waddensea	4th "	8	108	-	
Zeeland	2nd "	-	-	-	
Estuary	4th "	7	68	-	
Total annually		50	202	11.155	
				10.489	

1976 Sampling data for cod.

Area	Season	No. of samples for age determination only		Number of fish	
		research vessel	market	measured	aged
IV	1st quarter	11	12	2.318	1.167
	2nd "	-	10	2.242	483
	3rd "	-	11	2.850	560
	4th "	-	10	2.609	503
	Total annually	11	43	10.019	2.713

1976 Sampling data for dab.

Area	Season	No. of samples for age determination only		Number of fish	
		research vessel	market	measured	aged
IV	2nd quarter	15	-	8.000	605
	4th "	14	-	8.000	627
	Total annually	29	-	16.000	1.232

1976 Sampling data for haddock.

Area	Season	No. of samples for age determination only		Number of fish		
		research vessel	market	measured	aged	racial investigations
IV	1st quarter	6	4	1.333	494	-
	2nd "	-	4	1-109	188	-
	3rd "	-	9	2.030	449	-
	4th "	-	4	1.450	187	-
Total annually		6	21	5.922	1.318	-

1976 Sampling Data for whiting

Area	Season	No. of samples for age determination only		Number of fish		
		research vessel	market	measured	aged	racial investigations
IV	1st quarter	5	7	2.414	588	-
	2nd "	-	6	2.186	300	-
	3rd "	-	7	3.900	350	-
	4th "	-	6	2.571	287	-
Total annually		5	26	11.071	1.525	-

1976 Sampling data for Saithe.

Area	Season	No. of samples for age determination only		Number of fish		
		research vessel	market	measured	aged	racial investigations
IV	1st quarter	-	9	579	455	-
	2nd "	-	4	227	190	-
	3rd "	-	3	228	150	-
	4th "	-	3	452	145	-
Total annually		-	19	1486	940	-

Norway

(O. M. Smedstad)

Sub-areas I and II

The major roundfish species were sampled on approximately the same scale as in 1975. These data form the basis for the stock assessment programmes of Arcto-Norwegian cod and haddock, and saithe. They are used to provide forecasts for the Norwegian fisheries and to make assessments at ICES Working Groups.

The distribution and abundance of young cod and haddock were studied with research vessels in the Barents Sea in January–February. In February–March the concentrations of mature Arcto-Norwegian cod were charted in Lofoten. In August–September the annual International 0-group survey was carried out in the Barents Sea and adjacent waters, and in October the distribution and abundance of cod and redfish in the area of Bear Island – West Spitsbergen were studied.

Tagging experiments of the major roundfish species continued. In March mature cod were tagged in Lofoten. In June young saithe were tagged in the southern part of Division IIa. In August, cod, haddock and saithe were tagged in the coastal waters of northern Norway, and in October cod were tagged in the area Bear Island–West Spitsbergen.

The abundance of 0-group saithe in the littoral zone was studied at selected localities along the Norwegian coast in September. Market sampling of Recommendation 4 species from Division IIa continued.

Sub-area IV

Landings of Recommendation 4 species in the Recommendation 2 fisheries from Division IVa were more extensively sampled than in previous years.

The sampling programme gives estimates of relative abundance of the different species landed and biological data for the most important species.

Distribution and abundance of I- and II-group gadoids in June, as part of international surveys. The influx of 0-group blue whiting was investigated in November–December.

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		No. of samples	No. of fish			No. of samples	No. of fish		
			Aged	Measured	Tagged		Aged	Measured	
Haddock									
IVa	1	80	223	2 908	-	152	-	-	
	2	21	-	287	-	184	-	470	
	3	17	-	161	-	158	-	2 280	
	4	21	-	163	-	136	-	2 065	
IVb	1	27	354	1 345	-	-	-	-	
Saithe									
IVa	1	80	-	282	-	152	-	-	
	2	21	-	56	-	184	-	300	
	3	17	-	-	-	158	-	687	
	4	21	-	28	-	136	-	205	
IVb	1	27	-	46	-	-	-	-	
Whiting									
IVa	1	80	361	827	-	152	-	-	
	2	21	-	95	-	184	-	160	
	3	17	-	23	-	158	-	685	
	4	21	-	-	-	136	-	2 128	
IVb	1	27	130	1 053	-	-	-	-	
Norway pout									
IIa	1	-	-	-	-	16	-	507	
	2	-	-	-	-	41	-	400	
	3	-	-	-	-	11	-	105	
	4	-	-	-	-	21	-	1 028	
IVa	1	80	125	3 258	-	152	-	5 730	
	2	21	100	409	-	184	-	7 505	
	3	17	50	290	-	158	-	7 355	
	4	21	75	990	-	136	-	5 737	
IVb	1	27	30	216	-	-	-	-	
Blue whiting									
IIa	1	-	-	-	-	16	-	420	
	2	-	-	-	-	41	-	2 057	
	3	16	-	34	-	11	-	546	
	4	-	-	-	-	21	-	804	
IVa	1	80	-	321	-	152	-	2 651	
	2	21	-	156	-	184	-	7 365	
	3	17	-	83	-	158	-	3 094	
	4	21	-	392	-	136	-	1 471	

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET		
		No. of samples	No. of fish			No. of samples	No. of fish	
			Aged	Measured	Tagged		Aged	Measured
Sandeel								
IVa	1	80	-	100	-	-	-	-
	2	21	-	114	-	184	-	506
IVb	2	-	-	-	-	6	-	612
Silver smelt								
IIa	1	-	-	-	-	16	-	540
	2	-	-	-	-	41	-	477
	3	16	-	77	-	11	-	50
	4	-	-	-	-	21	-	284
IVa	1	-	-	-	-	152	-	407
	2	-	-	-	-	184	-	1 187
	3	17	-	30	-	158	-	1 401
	4	-	-	-	-	136	-	264
Silvery pout								
IIa	1	-	-	-	-	16	-	102
	2	-	-	-	-	41	-	200
	3	16	-	59	-	11	-	84
IVa	2	-	-	-	-	184	-	195
	3	-	-	-	-	158	-	106
Dab								
IVa	1	80	-	448	-	-	-	-
IVb	1	27	-	1 038	-	-	-	-
Long rough dab								
IVa	1	80	-	578	-	-	-	-
IVb	1	27	-	465	-	-	-	-

SPECIES AREA	Season	RESEARCH VESSEL					MARKET			
		Aged		Measured		Tagged	Aged		Measured	
		No. of samples	No. of fish	No. of samples	No. of fish		No. of samples	No. of fish	No. of samples	No. of fish
<u>Cod</u>										
I	1	16	1 393	26	2 681	-	-	-	-	-
	2	-	-	-	-	-	19	2 153	56	16 515
	3	3	300	21	1 461	1 172	-	-	-	-
	4	-	-	-	-	-	5	430	8	1 742
IIa	1	-	-	2	24	3 751	28	1 754	11	2 650
	2	-	-	-	-	1 014	3	234	7	2 370
	3	1	40	21	345	197	-	-	-	-
	4	-	-	3	29	103	8	675	8	1 617
IIb	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	1	100	3	5	-	-	-	-	-
	4	19	1 250	32	1 157	369	-	-	-	-
<u>Haddock</u>										
I	1	5	425	27	2 546	-	-	-	-	-
	2	-	-	-	-	-	10	881	28	5 194
	3	1	100	12	564	272	-	-	-	-
	4	-	-	-	-	-	3	874	1	576
IIa	1	-	-	1	11	-	2	64	2	50
	2	-	-	-	-	-	-	-	7	458
	3	3	241	33	1 302	503	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
IIb	1	-	-	1	3	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	5	113	-	-	-	-	-
	4	2	89	15	183	-	-	-	-	-
IVa	1	3	287	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	1	55	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
<u>Saithe</u>										
I	2	-	-	-	-	-	2	124	4	502
	3	2	173	4	1 002	1 000	-	-	-	-
	4	-	-	-	-	-	1	120	1	338

SPECIES AREA	Season	RESEARCH VESSEL						MARKET					
		Aged		Measured		Tagged	Aged		Measured				
		No. of samples	No. of fish	No. of samples	No. of fish		No. of samples	No. of fish	No. of samples	No. of fish			
<u>Saithe</u>													
IIa	1	1	81	4	61	-	5	567	9	2	323		
	2	4	280	5	2 166	2 400	3	310	8		857		
	3	2	199	5	1 194	1 000	12	1 400	11	3	194		
	4	-	-	-	-	-	7	840	8	2	653		
IIb	3	-	-	1	3	-	-	-	-	-	-	-	
	4	-	-	1	1	1 800	-	-	-	-	-	-	
IVa	1	3	254	-	-	-	-	-	-	2	405		
	2	1	60	1	309	-	-	-	-	-	-	-	
	3	-	-	-	-	-	1	120	2		395		
IVb	2	-	-	1	2	-	-	-	-	-	-	-	
<u>Greenland halibut</u>													
I	1	-	-	1	3	-	-	-	-	-	-	-	
IIa	4	-	-	3	99	-	-	-	-	-	-	-	
IIb	4	-	-	10	249	-	-	-	-	-	-	-	
<u>Ling</u>													
IIa	2	-	-	-	-	-	-	-	-	1	242		
	3	-	-	1	2	-	-	-	-	6	1 218		
IVa	2	3	301	4	1 127	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	3	1 815		
Vb	2	1	103	2	270	-	-	-	-	-	-	-	
VIa	2	2	200	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	2	238	-	-	-	-	
VIb	2	1	100	-	-	-	-	-	-	-	-	-	
<u>Blue ling</u>													
Vb	3	-	-	-	-	-	1	134	-	-	-	-	
VIa	2	1	100	-	-	-	-	-	-	-	-	-	
<u>Tusk</u>													
I	3	-	-	1	2	-	-	-	-	-	-	-	
IIa	2	-	-	-	-	-	-	-	-	1	204		
	3	-	-	-	-	-	-	-	-	5	2 358		
IVa	2	1	92	4	377	-	-	-	-	-	-	-	
	3	-	-	-	-	-	1	2	2	2	1 122		
	4	-	-	-	-	-	-	-	-	1	502		

SPECIES AREA	Season	RESEARCH VESSEL						MARKET			
		Aged		Measured		Tagged	Aged		Measured		
		No. of samples	No. of fish	No. of samples	No. of fish		No. of samples	No. of fish	No. of samples	No. of fish	
<u>Tusk</u>											
Vb	2	2	200	2	431	-	-	-	-	-	-
VIIa	2	1	100	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	2	202	-	-	-
VIIb	2	2	189	-	-	-	-	-	-	-	-
<u>Norway pout</u>											
I	1	-	-	2	98	-	-	-	-	-	-
	3	-	-	1	46	-	-	-	-	-	-
IIa	3	-	-	4	12	-	-	-	-	-	-
IIb	4	-	-	1	1	-	-	-	-	-	-
IVa	1	1	57	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	1	99	-	-	-
	3	1	51	-	-	-	-	-	-	-	-
<u>Blue whiting</u>											
I	1	-	-	2	3	-	-	-	-	-	-
	3	-	-	4	27	-	-	-	-	-	-
IIa	3	-	-	7	270	-	-	-	-	-	-
	4	-	-	4	267	-	-	-	-	-	-
IIb	4	-	-	28	2422	-	-	-	-	-	-
<u>Silver smelt</u>											
I	1	-	-	2	10	-	-	-	-	-	-
IIa	3	-	-	1	3	-	-	-	-	-	-
<u>Sandeel</u>											
I	3	-	-	7	211	-	-	-	-	-	-
IIa	3	-	-	2	6	-	-	-	-	-	-

Poland

(W. Cieglewicz & J. Janusz)

Sampling Data for Cod, Haddock, Saithe, Whiting and Blue Whiting

Area	Season Quarters	No. of Samples		No. of Fish	
		Research Vessels	Commercial Vessels	Measured	Aged
<u>COD</u>					
IIb	3	-	14	19 793	1 392
IVa	1	-	4	197	198
	3	1	-	327	117
<u>HADDOCK</u>					
	1	-	10	4 218	1 099
IVa,b	2	-	4	1 128	401
	3	4	3	7 256	802
	4	-	2	2 418	200
VI	2	-	1	150	-
	3	3	-	2 126	301
<u>SAITHE</u>					
	1	-	9	16 719	998
IVa	2	-	11	4 418	1 103
	3	4	7	11 146	1 274
	4	-	12	5 324	1 202
<u>WHITING</u>					
IVa,b	1	-	5	1 312	526
	2	-	2	265	202
	3	1	6	6 247	701
	4	-	2	2 274	195
<u>GREENLAND HALIBUT</u>					
IIb	4	-	3	500	276

Portugal

(M. de Lourdes Marecos)

Pendant l'année de 1976 le Département de Pêches et Ressources (ex-Institut de Biologie Maritime) a poursuivi le programme d'échantillonnage de la morue (Gadus morhua) de NEAFC pour l'étude de la composition des tailles. Les poissons ont été mesurés à bord d'un bateau de pêche. Les données qui se réfèrent aux échantillons sont présentées dans le tableau ci-dessous :

Région	Saison	No. de poissons mesurés
I	2ème	911
	3ème	2 406
II	2ème	2 128
	3ème	1 102
III	2ème	614
	3ème	640

Spain  
(O. Cendrero)

Nothing to report for 1976.

Sweden  
(G. Otterlind)

Swedish investigations have been confined mainly to the Baltic and have been reported to the Baltic Fish Committee.

United Kingdom

1. England and Wales  
(A.C. Burd)

1. Sampling

COD

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
Arctic 101+102+113		151	43710	2517	
Iceland 111		276	74205	2851	
Greenland 114		6	1550	35	
Faroe 105		62	9447	1239	
North Sea 104		997	131427	6532	
Westerly 106A		61	10479	876	
Irish Sea 107A		152	21652	2492	
Rockall 106B		2	119	19	
Bristol Channel 107F		5	459	14	
S.E. Ireland 107G		2	445	65	
E. English Channel 107D		40	1673	161	
W. English Channel 107E		15	876	12	
(FREEZER) Arctic 101+102+113		84	39560	-	

HADDOCK

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
Arctic 101+102+113		130	28170	1126	
Iceland 111		162	30862	806	
Faroe 105		44	7942	49	
Kattegat/Skagerrak 103A		1	244	-	
North Sea 104		509	68162	919	
Westerly 106A		43	8822	839	
Irish Sea 107A		48	3068	299	
Bristol Channel 107F		3	303	-	
S.E. Ireland 107G		2	127	-	
Rockall 106B		22	3156	142	
(FREEZER) Arctic 101+102+113		11	934	-	

SAITHE

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
Arctic 101+102+113		31	3543	450	
Iceland 111		57	3886	1240	
Faroe 105		20	2048	432	
North Sea 104		57	6308	628	
Westerly 106A		62	7282	580	
Rockall 106B		6	199	34	
(FREEZER) Arctic 101+102+113		16	1040		
104		1	66		

PLAICE

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
Arctic 101+102+113		33	8687	-	
North Sea 104		428	81805	3675	
Westerly 106A		5	1409	62	
Irish Sea 107A		167	30698	2060	
Bristol Channel 107F		14	3006	191	
S.E. Ireland 107G		5	1338	125	
E. English Channel 107D		55	4432	824	
W. English Channel 107E		159	13109	1599	

WHITING

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
Faroe 105		2	79	-	
North Sea 104		472	39432	1138	
Westerly 106A		4	352	50	
Irish Sea 107A		138	18121	1379	
Bristol Channel 107F		11	1175	76	
S.E. Ireland 107G		3	322	50	
E. English Channel 107D		24	2558	-	
W. English Channel 107E		106	10284	556	

SOLE

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
North Sea 104		190	24550	304	
Irish Sea 107A		79	14439	533	
Bristol Channel 107F		16	3601	54	
S.E. Ireland 107G		5	1354	57	
Westerly 106A		2	356	-	
E. English Channel 107D		93	7190	649	
W. English Channel 107E		170	15269	796	

TURBOT

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
North Sea 104		115	6316	-	

LEMON SOLE

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
W. English Channel 107E		172	14724	499	
Bristol Channel 107F		5	687	-	

HAKE

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
North Sea 104		5	472	-	-
Westerly 106A		59	10025	-	-
Irish Sea 107A		65	8129	-	-
Bristol Channel 107F		7	1305	-	-
S.E. Ireland 107G		4	735	-	-

SPURDOG

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
North Sea 104		113	9196	-	-
Westerly 106A		46	4647	-	-

SKATES AND RAYS

Area	No. of samples		No. of fish		
	Research vessels	Market samples	Measured	Aged	Racial invest
North Sea 104		46	2650	-	-
Westerly 106A		31	3200	-	-
Irish Sea 107A		159	17143	-	-
Bristol Channel 107F		12	1631	-	-
S.E. Ireland 107G		10	1613	-	-

Release of English tagged fish in ICES areas during 1976

Species	Region						Total
	104A	104B	104C	107D	107E	107A	
Plaice	-	-	97	2358	52	37	2544
Sole	-	-	1110	405	21	-	1536
Lemon sole	-	173	-	79	58	-	310
Rays	-	-	49	495	-	-	544
Cod	381	500	-	8	-	502	1391
Haddock	13	326	-	-	-	-	339
Whiting	-	355	352	-	-	-	707
Bass	-	-	-	5	-	-	5
Turbot	-	-	-	32	-	-	32
Brill	-	-	-	30	-	-	30
Spurdog	-	-	10	-	-	-	10
Total	394	1354	1569	4312	131	539	7399

2. Scotland

(R. Jones)

Scottish research vessels worked at Faroe, in July, and participated in the International Young Herring Survey in the North Sea in February. 0-group gadoids were sampled pelagically in the North Sea in June.

Routine monitoring of the abundance and composition of the major roundfish and flatfish species was continued as in previous years, the data being obtained by sampling at the principle Scottish trawl and seine net ports.

At the request of ICES, discarding by commercial fishing vessels was investigated. Thirtyfour trips were undertaken, 26 aboard seine-net vessels and 8 aboard trawlers.

During 1976 sampling of commercial landings of Norway pout and sandeels was carried out. In addition, information on the relative abundance of these species was obtained on research vessel surveys.

Tagging of the major round- and flatfish species has continued with emphasis on tagging in offshore North Sea waters.

Aquarium studies have continued on the efficiency of conversion of food into growth and reproduction in gadoids.

The numbers of fish measured and aged in 1976 are shown in the table on the following page.

NUMBERS OF FISH MEASURED AND AGED IN 1976

	COD MEAS. •	HADDOCK MEAS. •	WHITING AGED	SAITHE MEAS. •	HAKE AGED	T.ESMARKI MEAS. •	SANIEL AGED	PLAICE MEAS. •	LEMON SOLE AGED	MEGRIM MEAS. •	DOGFISH (Squalus) AGED
NORTH SEA											
1)	44335	12159	147187	14961	97847	13808	13366	5619	-	6881	1023
2)	664	486	5477	496	40295	1571	-	-	-	19482	52
WEST COAST											
1)	8993	3798	52839	9528	47729	7581	9919	3005	2904	-	531
2)	-	-	-	-	-	-	-	-	-	-	-
FAROE											
1)	8924	-	23813	5065	5441	1852	5436	3061	-	-	6020
2)	2122	-	17821	1819	780	657	596	-	-	11835	122
ICELAND											
1)	513	-	2069	848							
WHITE SEA											
1)	2163	-	2798								1326

- 1) MARKET SAMPLING DATA  
2) RESEARCH VESSEL DATA

U.S.A.  
(B.E. Brown)

Sampling data and research activities relative to demersal fish have been reported to ICNAF.

U.S.S.R.  
(P.A. Moiseev)

In 1976, as in previous years, data were collected to characterise the abundance, age-length composition and distribution of cod, haddock, Polar cod, redfish, Greenland halibut and other bottom fish in the ICES zone. The figures in the following tables show the volume of data collected by areas. Samples were collected on board the research and scouting vessels; no racial investigations were made.

Investigations towards refining the assessment of the state of the main commercial fish were continued, both by means of the young fish determination and estimates of absolute abundance. The survival conditions of young fish at different stages of development were studied; ichthyoplankton was gathered and analysed; fisheries forecasts for different periods were compiled; the forecasting technique was improved.

In 1976 the research activities were continued in the North Sea to study the abundance, dynamics and the state of the gadoid stocks.

In spring 1976 a trawling survey on abundance of different gadoid year classes was made. The distribution was studied and the age structure determined. The collection and treatment of material on the biology of haddock, whiting, pollack, cod, blue whiting and Norway pout were continued. Ecological surveys were made, aimed at investigations of the influence of environmental factors on abundance of haddock year classes. In July-August, a trawling survey of the abundance of 0-group gadoids was conducted.

In 1977 the research will be progressing under the same programme.

Sampling Data for Cod

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	14	114810	7099
	II	35	102039	7909
	III	15	77714	2776
	IV	12	67457	3414
the northwest-ern Barents Sea	I	2	7274	400
	II	12	23881	2570
	III	4	7279	999
	IV	3	22578	1161
the northwest coast of Norway	I	1	888	4
	II	5	2556	1236
	III	—	—	—
	IV	1	717	300
East Greenland	I	—	—	—
	II	1	1411	—
	III	1	957	—
	IV	—	—	—
the Faroe Islands	I	—	—	—
	II	—	6	—
	III	—	—	—
	IV	—	—	—

Sampling Data for Haddock

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	3	46461	2246
	II	11	41737	2697
	III	8	16290	1232
	IV	9	12591	1537
the northwestern Barents Sea	I	—	—	—
	II	1	80	9
	III	—	12	—
	IV	—	460	—
the northwestern coast of Norway	I	1	1162	282
	II	10	2471	1241
	III	—	—	—
	IV	—	39	—

Sampling data for redfish

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	-	19728	-
	II	6	21664	1633
	III	-	2809	-
	IV	1	252	100
the northwestern Barents Sea	I	2	12143	604
	II	9	20353	2222
	III	7	40112	1800
	IV	1	19176	298
the northwestern coast of Norway	I	-	943	-
	II	3	6729	824
	III	-	-	-
	IV	-	56	-
East Greenland	I	-	-	-
	II	3	15498	-
	III	3	14583	-
	IV	-	-	-
the Faroe Islands	I	-	-	-
	II	-	29	-
	III	-	-	-
	IV	-	-	-

Sampling Data for Greenland Halibut

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	-	1048	-
	II	-	609	-
	III	-	62	-
	IV	-	107	-
the northwestern Barents Sea	I	-	107	-
	II	-	457	-
	III	-	580	-
	IV	-	13806	-
the northwestern coast of Norway	I	-	5	-
	II	-	4	-
	III	-	-	-
	IV	-	-	-

Sampling Data for Saithe

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	-	7	-
	II	1	570	300
	III	-	20	-
	IV	-	76	-
the northwestern Barents Sea	I	-	-	-
	II	-	5	-
	III	-	56	-
	IV	-	-	-
the northwestern coast of Norway	I	-	121	-
	II	-	930	-
	III	-	-	-
	IV	1	1300	300

Sampling Data for Long Rough Dab

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	-	3528	-
	II	-	2154	-
	III	1	936	-
	IV	2	6994	-
the northwestern Barents Sea	I	-	-	-
	II	-	607	-
	III	-	271	-
	IV	-	-	-

Sampling Data for Plaice

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	4	2899	493
	II	1	911	219
	III	3	2597	458
	IV	2	732	227

Sampling Data for Catfish

Area	Season	No. of samples	Number of fish	
			Measured	Aged
the southern Barents Sea	I	-	2534	-
	II	2	2078	-
	III	1	994	-
	IV	-	851	-
the northwestern Barents Sea	I	-	274	-
	II	1	687	-
	III	-	741	-
	IV	-	1609	-
the northwestern coast of Norway	I	-	3	-
	II	-	17	-
	III	-	-	-
	IV	-	-	-

Sampling Data, 1976 (North Sea)

Species	Number of Fish		
	Mass measurements	Aged	Biological Analysis
Haddock	15 990	3 539	2 300
Pollack	18 089	2 020	5 110
Whiting	38 910	1 400	2 000
Cod	2 300	-	-
Norway Pout	54 000	1 936	980

