International Council for
the Exploration of the Sea

C.M. 1986/G:1
Report of Activities

DEMERSAL FISH COMMITTEE

by

B. Vaske

1985

BELGIUM

(R. De Clerck)

Recording of densities and growth rates of the 1984 and 1985 year classes of sole, plaice, dab, flounder, cod and whiting was carried out.

Two cruises were also undertaken for the international demersal young fish survey.

A programme was initiated in order to estimate the stock size of adult flatfish in the Southern North Sea by means of a groundfish survey in August.

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

1985

Species Area	Season	No of samples		No of samples	
		Research	Market	Measured	Aged
Sole	1	-	10	1053	210
IV	2	-	12	1146	210
	3	-	11	1183	203
	4	-	12	1238	209
VII f, g	1	-	11	1046	200
	2	-	6	573	210
	3	-	5	418	120
	4	-	-	-	-
VII a	1	-	1	70	70
	2	-	6	561	210
	3	-	2	140	140
	4	-	1	70	70
VII d, e	1	-	3	210	200
	2	-	3	210	210
	3	-	3	217	130
	4	-	3	210	210
Plaice	1	-	10	598	130
IV	2	-	12	682	140
	3	-	12	897	252
	4	-	12	715	140
VII f, g	1	-	1	50	50
	2	-	1	50	50
	3	-	1	50	50
	4	-	-	-	-
VII a	1	-	1	40	40
	2	-	6	275	120
	3	-	2	80	80
	4	-	1	40	40
VII d, e	1	-	1	50	50
	2	-	1	50	50
	3	-	1	50	50
	4	-	1	50	50

Species / Area	Season	No of samples		No of samples	
		Research	Market	Measured	Aged
Cod	1	-	4	299	130
IV	2	-	2	115	115
	3	-	5	504	60
	4	-	6	332	200
Whiting	1	-	9	596	170
IV	2	-	4	576	30
	3	-	8	605	70
	4	-	9	732	105
Haddock	1-4	-	3	169	70
IV					

CANADA

(R. Wells)

Canada had no fisheries and no research activity in the ICES area in 1985. Activities in the Northwest Atlantic in 1985 have been reported to NAFO.

Species: Cod

DENMARK

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	664	660	
	2	"		172	575	575	
	3	"		48	540	540	
	4	"		44	590	590	
Skager-rak	1	"		32	435	380	
	2	"		22	655	653	
	3	"		24	327	287	
	4	"		7	324	324	
Katte-gat	1	Mixed		34	564	562	
	2	"		30	429	428	
	3	"		36	473	395	
	4	"		27	405	405	
The Belt Sea	1	Mixed		2	192	192	
	2	"		5	130	130	
	3	"		6	176	175	
	4	"		10	267	266	
Baltic	1	Mixed		18	1306	1304	
	2	"		17	1128	1126	
	3	"		25	1307	1296	
	4	"		25	2127	2125	

Species: Plaice

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	1434	1403	
	2	"		172	1295	1265	
	3	"		48	1212	1200	
	4	"		44	1216	1209	
Skager-rak	1	Mixed		32	818	775	
	2	"		22	786	748	
	3	"		24	698	660	
	4	"		7	764	717	
Katte-gat	1	Mixed		34	1354	1325	
	2	"		30	1566	1540	
	3	"		36	1466	1405	
	4	"		27	1540	1494	
Baltic	1	Mixed		18	163	162	
	2	"		17	24	23	
	3	"		25	121	119	
	4	"		25	176	174	

Species: Dab

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
Katte-gat	1	Mixed		34	194	193	
	2	"		30	0	0	
	3	"		36	227	226	
	4	"		27	225	222	
The Belt Sea	1	Mixed		2	0	0	
	2	"		5	185	183	
	3	"		6	0	0	
	4	"		10	0	0	
Baltic	1	Mixed		18	143	142	
	2	"		17	294	291	
	3	"		25	94	90	
	4	"		25	214	213	

Species: Whiting

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		114	131	130	
	2	"		172	39	39	
	3	"		48	122	118	
	4	"		44	635	630	
Skager-rak	1	Mixed		32	772	772	
	2	"		22	208	208	
	3	"		24	16	11	
	4	"		7	1	0	
Katte-gat	1	Mixed		34	662	661	
	2	"		30	17	17	
	3	"		36	15	14	
	4	"		27	168	168	

Species: Saithe

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	393	381	
	2	"		172	382	378	
	3	"		48	400	364	
	4	"		44	0	0	
Skager-rak	1	Mixed		32	3	1	
	2	"		22	0	0	
	3	"		24	0	0	
	4	"		7	0	0	

Species: Haddock

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	450	445	
	2	"		172	311	309	
	3	"		48	303	302	
	4	"		44	436	418	
Skager-rak	1	Mixed		32	533	529	
	2	"		22	425	422	
	3	"		24	290	267	
	4	"		7	305	300	
Katte-gat	1	Mixed		34	4	4	
	2	"		30	1	1	
	3	"		36	1	1	
	4	"		27	0	0	

Species: Sole

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	0	0	
	2	"		172	0	0	
	3	"		48	257	255	
	4	"		44	0	0	
Skager-rak	1	Mixed		32	0	0	
	2	"		22	0	0	
	3	"		24	0	0	
	4	"		7	0	0	
Katte-gat	1	Mixed		34	159	158	
	2	"		30	222	217	
	3	"		36	265	262	
	4	"		27	299	294	

Species: Sandeel

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	1793	1793	
	2	"		172	14575	14575	
	3	"		48	1662	1662	
	4	"		44	0	0	
Skager-rak	1	Mixed		32	0	0	
	2	"		22	448	448	
	3	"		24	0	0	
	4	"		7	0	0	

Species: Norway Pout

Area	Season	Type of fish	No of samples		No of fish		
			Research vessel	Market	Measured	Aged	Examined racially
North Sea	1	Mixed		144	6970	6970	
	2	"		172	1183	1183	
	3	"		48	913	912	
	4	"		44	2135	2135	
Skager-rak	1	Mixed		32	1025	1025	
	2	"		22	393	393	
	3	"		24	68	68	
	4	"		7	0	0	

FINLAND

(V. Sjöblom and E. Aro)

No work was carried out on demersal fishes other than that reported to the Baltic Fish Committee.

FRANCE

(A. Souplet)

I. CAMPAGNES SCIENTIFIQUES A LA MER

Le N/O "THALASSA" a participé, du 27 janvier au 23 février 1985, au programme International Young Fish Survey. Il a été effectué 17 stations dans la division IV A, 42 en IV B et 22 en IV C.

Le programme de suivi des ressources du Golfe de Gascogne (divisions VIII A-B) a été poursuivi à bord du N/O "PELAGIA" avec les campagnes trimestrielles RESGAS : 29 stations ont été échantillonnées au 1er trimestre, 27 au 2ème, 26 au 3ème et 37 au 4ème.

II. MENSURATIONS ET AGEAGE

Les opérations d'échantillonnage à terre et à la mer sont résumées dans les tableaux joints.

REPORT OF ACTIVITY - FRANCE - 1985

SPECIES	AREA	SEASON	NB. OF SAMPLES		NB. OF FISH		
			RESEARCH VESSEL	MARKET SAMPLES	MESURED	AGED	OTHER
SAITHE	IV A	1st Q	8	+	116	140	
		2nd Q		+	+	252	
		3rd Q		+	+	241	
		4th Q		+	+		
	VI A	1st Q		+	1389	313	
		2nd Q		+	2142	433	
		3rd Q		+	1779	331	
		4th Q		+	1742	347	
COD	IV A	1st Q	16	+	132	140	
		2nd Q		+	+		
		3rd Q		+	+	472	
		4th Q		+	+		
	IV B	1st Q	32	+	636	624	
		2nd Q		+	+		
		3rd Q		+	+	+	
		4th Q		+	+		
	IV C	1st Q	26	+	300	139	
		2nd Q		+	+		
		3rd Q		+	+		
		4th Q		+	+		
	VI A	1st Q		+	269		
		2nd Q		+	815		
		3rd Q		+	719		
		4th Q		+	775		
	VII A	1st Q		2	299		
		2nd Q		2	377		
		3rd Q		3	405		
		4th Q		3	435		
	VII FG	1st Q		6	642	217	
		2nd Q		7	1087	235	
		3rd Q		3	443	97	
		4th Q		3	372	128	

REPORT OF ACTIVITY - FRANCE - 1985

SPECIES	AREA	SEASON	NB. OF SAMPLES		NB. OF FISH		
			RESEARCH VESSEL	MARKET SAMPLES	MESURED	AGED	OTHER
HADDOCK	IV A	1st Q	17	+	3059	947	
		2nd Q		+	+	234	
		3rd Q		+	+	534	
		4th Q		+	+		
	IV B	1st Q	30	+	1317	419	
		2nd Q		+	+	+	
		3rd Q		+	+	+	
		4th Q		+	+		
	IV C	1st Q	7		10		
	VI A	1st Q		+	1027		
		2nd Q		+	1323		
		3rd Q		+	1347		
		4th Q		+	1597		
WHITING	IV A	1st Q	17	+	1167	458	
		2nd Q		+	+	385	
		3rd Q		+	+	407	
		4th Q		+	+	48	
	IV B	1st Q	30	+	3826	998	
		2nd Q		+	+	+	
		3rd Q		+	+	+	
		4th Q		+	+	+	
	IV C	1st Q	26	+	2809	461	
		2nd Q		+	+	+	
		3rd Q		+	+	+	
		4th Q		+	+	+	
	VII A	1st Q		2	523		
		2nd Q		2	531		
		3rd Q		3	722		
		4th Q		2	457		
	VII D	1st Q		+	+	+	
		2nd Q		+	+	187	
		3rd Q		+	+	302	
		4th Q		+	+	125	
	VII FG	1st Q		4	1021	259	
		2nd Q		6	1584	283	
		3rd Q		2	568	252	
		4th Q		2	435	147	
	VII not allocated	1st Q		+	600		
		2nd Q		+	1120		
		3rd Q		+	1120		
		4th Q		+	240		

REPORT OF ACTIVITY - FRANCE - 1985

SPECIES	AREA	SEASON	NB. OF SAMPLES		NB. OF FISH		
			RESEARCH VESSEL	MARKET SAMPLES	MESURED	AGED	OTHER
HAKE	VI A	1st Q		15	382		
		2nd Q		22	728		
		3rd Q					
		4th Q					
	VII	1st Q		13	448		
		2nd Q		20	611		
		3rd Q		19	661		
		4th Q		30	1005		
	VIII	1st Q	25	72	5742	166	
		2nd Q	29	54	6390	442	
		3rd Q	25	47	6431	275	
		4th Q	36	71	5961	594	
NORWAY POUT	IV A	1st Q	16		666	113	
MONKS (various)	VII EF	1st Q		+	463		
		2nd Q		+	450		
		3rd Q		+	704		
		4th Q		+	640		
	VII AG	1st Q		+	491		
		2nd Q		+	933		
		3rd Q		+	2296		
		4th Q		+	2124		
	VII H+ VIII A2	1st Q		+	1561		
		2nd Q		+	3433		
		3rd Q		+	2940		
		4th Q		+	2261		
	VII not allocated	1st Q		15	331		
		2nd Q		18	404		
		3rd Q		12	330		
		4th Q		28	760		
	VIII	1st Q	23	+	3262		
		2nd Q	22	+	5114	88	
		3rd Q	19	+	4550	87	
		4th Q	29	+	3864	41	

REPORT OF ACTIVITY - FRANCE - 1985

SPECIES	AREA	SEASON	NB. OF SAMPLES		NB. OF FISH		
			RESEARCH VESSEL	MARKET SAMPLES	MESURED	AGED	OTHER
SOLE	VII D	1st Q		+	5291	87	
		2nd Q		+	4398	82	
		3rd Q		+	4247	182	
		4th Q		+	1138	289	
	VII E	1st Q		4	269		
		2nd Q		3	79		
		3rd Q		3	257		
		4th Q					
	VIII	1st Q	24	44	3023	478	
		2nd Q	24	42	2658	196	
		3rd Q	18	43	2801	42	
		4th Q	29	33	2501	210	
PLAICE	VII D	1st Q		+	856		
		2nd Q		+	1525		
		3rd Q		+	252		
	VII E	1st Q		2	228		
	VII (other)	1st Q		+	300		
		2nd Q		+	600		
		3rd Q		+	200		
		4th Q		+	50		
DAB	IV A	1st Q	+		534	268	
	IV B	1st Q	+		15340	1709	
	IV C	1st Q	+		4917	731	
	VII D	1st Q		+	1002	434	
		2nd Q		+	1416	488	
		3rd Q		+	808	97	
		4th Q		+	538	364	
	VII (other)	1st Q		+	500		
		2nd Q		+	1000		
		3rd Q		+	1500		
		4th Q		+	240		
LEMON SOLE	VII BC-GK	1st Q		+	300		
		2nd Q		+	600		
		3rd Q		+	600		
		4th Q		+	200		

REPORT OF ACTIVITY - FRANCE - 1985

SPECIES	AREA	SEASON	NB. OF SAMPLES		NB. OF FISH		
			RESEARCH VESSEL	MARKET SAMPLES	MESURED	AGED	OTHER
MEGRIM	VII EF	1st Q		1	325		
		2nd Q					
		3rd Q		2	485		
		4th Q		1	325		
	VII AG	1st Q		9	1485		
		2nd Q		8	1475		
		3rd Q		6	1300		
		4th Q		5	1135		
	VII H+	1st Q		19	3755		
	VIII A2	2nd Q		11	2745		
		3rd Q		4	980		
		4th Q		8	1475		
	VII not	1st Q		+	300		
	alloca-	2nd Q		+	1600		
	ted	3rd Q		+	3200		
		4th Q		+	1000		
CONGER EEL	VIII	1st Q	7		348		
		2nd Q	26		1278		
		3rd Q	6		136		
		4th Q	14		219		
SKATE (Raja naevus)	VII not alloca- ted	1st Q		+	800		
		2nd Q		+	800	100	
		3rd Q		+	800	100	
		4th Q		+	800	100	

German Democratic Republic
(B. Vaske)

Specie/Area		Season Quarter	No. of Samples		No. of fish	
			Research Vessel	Commercial vessel	Measured	Aged
Redfish (S. mentella)	IIa	II	-	32	5304	784
	XII	II	35	-	4647	645
	XIVa	I	-	1	70	50
		II	60	-	8632	1292
		II	-	17	3141	335
		III	-	1	31	31
Greenland halibut		III	-	11	1492	489

FEDERAL REPUBLIC OF GERMANY

(G. Rauck)

The biological sampling programme of demersal species on board research vessels, commercial trawlers and on fish markets has been continued.

This sampling scheme, including length frequency measurements, otolith samplings, single weights of fish, tagging of fish, stomach sampling, as well as studies on fish density and distribution of demersal fish species were carried out during ground fish surveys.

The monthly bycatch analysis of the shrimp fishery as well as joint investigations in the Wadden Sea area of Niedersachsen and Schleswig-Holstein have been continued in spring and autumn together with vessels from the Netherlands and Belgium.

Investigations on cod discards in the commercial fisheries and cod selectivity studies using mesh sizes of 90 and 100 mm mesh openings were carried out in the German Bight.

The cod sampling scheme off Greenland has been intensified aiming at a stock separation by means of different otolith structures.

A North Sea groundfish survey with special emphasis on the gadoid and pelagic species covering the area IVa and b has been repeated.

Cruises of research vessels and commercial factory ships related to the national sampling scheme of the demersal species were as follows:

Months	ICES area	Objectives
R.V. "Walter Herwig"		
Sept./Nov.	XIV	Groundfish survey
R.V. "Anton Dohrn"		
January	IVb	Groundfish survey
Febr./March	IVabc	IYFS
April/May	VI VII VIII	Pelagic fish survey
July/Aug.	IVabc	Groundfish survey
Sept.	IVa VIa VIIb VIIg-k	Pelagic fish survey

Months	ICES ares	Objectives
R. V. "Solea"		
January	IVb	2 Groundfish surveys
Febr./March	IVbc	Groundfish survey
June	IVb	Sole beamtrawl survey
June/July	IVb	Groundfish survey
August	IVb	" "
Sept./Oct.	IVb	" "
Nov.	IVb	" "
Dec.	IVb	" "
Commercial vessels		
Febr.-May	XIV	Redfish, cod fishery
June/July	IIb	Groundfish fishery
Aug./Sept.	IIb	" "

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	No. of Fish Aged	Racial Investig-ationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Cod								
IIa	I					2	613	310
IIb	II+III					51*	11.847*	
IVa	I	52	1.076	703				
	III	60	675	674				
IVb	I	203	9.277	749		2*	1.241*	
	II	37	314	-				
	III	142	6.839	2.195				
	IV	26	7.248	-		3*	1.417*	
IVc	I	8	25	25				
VIa	I	1	1					
	II	16	45					
	III	37	188					
VIb	I	6	37					
VIIb	II	10	52					
	III	1	2					
VIIe	II	1	1					
VIIf	II	2	5					
VIIg-k	II	9	32					
VIIh	III	8	20					
XIVb	I	103	1.940	1.940		18	1.722	1.161
	II					29*	8.472*	590*
	IV	117	4.974	1.900		2	731	367

* Samples of commercial catches taken at sea

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	No. of Fish Aged	Racial Investig-ationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Haddock								
IIa	I					1	207	163
IIb	II+III					7*	2.129*	
IVa	I	61	11.177	507				
	III	63	9.064	493		2	1.160	550
	IV					1	457	169
IVb	I	104	5.523	450				
	II	36	380					
	III	86	8.022	347				
VIa	I	2	236					
	II	28	6.508					
	III	52	10.869					
VIb	I	7	2.542					
	II	3	694					
VIIb	II	19	422					
	III	1	81					
VIIf	II	1	3					
VIIg-k	II	5	18					
	III	6	168					

* Samples of commercial catches taken at sea

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	No. of Fish Aged	Racial Investigationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Whiting :								
IVa	I	53	4.083	228				
	III	54	1.400	226				
IVb	I	95	5.412	225				
	III	144	8.033	208				
IVb - IVc	I	47	2.585					
	II	36	1.763					
IVc	I	8	184					
VIa	II	24	2.960					
	III	49	4.640					
VIIb	II	11	238					
	III	1	215					
VIIe	II	4	169					
VIIf	II	3	273					
VIIg-h	II	7	192					
	III	6	95					
VIII	II	2	7					

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	No. of Fish Aged	Racial Investigationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Saithe								
IIa	I					5	1.987	1.015
	II					2	772	399
	III					1	2.986	283
IVa	I	1	1.634	169		3	1.313	694
	II					10	3.698	1.943
	III	1	2.204	696		9	3.771	1.316
	IV					7	2.498	1.022
IVb	III	1	124	124				
Vb	I					1	408	211
VIa	I					2	415	762
Pollack								
IV	I	1	408					
	III	1	139	10				

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	Aged	Racial Investigationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Plaice								
IVb	I	147	5.672			2	2.001	783
	II	116	12.529			8	6.364	656
	III	237	24.173			3	2.060	478
	IV	39	4.196			8	6.538	530
IVc	I	8	328					
Sole								
IVb	I	12	343			1	94	93
	II	2	107			7	418	218
	III	69	2.492	839		4	660	391
	IV					1	210	210
Dab								
IVb	I	133	11.742					
	II	58	8.683					
	III	173	27,773					
	IV	35	7.153					
Flounder								
Vb	I	39	257					
	II							
	III	76	719					
	IV							

Species Area	Season	Research Vessel Samples				Market Samples		
			No. of Fish				No. Of Fish	
		No. of Samples	Measured	Aged	Racial Investig-ationn	No. of Samples	Measured	Aged
Turbot								
IVb	II	10	279	267		3	275	275
Redfish								
S. marinus								
IIa	I					1	562	200
	II					5	1.981	361
IIb	III					24*	5.860	346
XIV	I					15*	6.430	379
	II					2	937	211
	IV	149	17.982	1.263		6*	1.899	16
S. mentella								
IIa	I					4	1.575	259
IIb	III					33*	7.886	433
Vb	I					9	2.334	413
	II					2	777	304
XIV	II					3	1.664	200
	III					9	5.172	581
	IV	137	24.695	338				

* Samples of commercial catches taken at sea.

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish Measured	No. of Fish Aged	Racial Investigationn	No. of Samples	No. Of Fish Measured	No. Of Fish Aged
Blue Ling								
IVa	I					2	391	239
Vb	I					4	889	498
	II					1	211	123
	IV					5	1.168	621
Vb-VIa	II-III	1	288	288				
VIa	I					1	252	141
XIV	II					2	497	270
	III					6	1.374	611
	III-IV	1	228	228				
	IV					3	691	374
Norway Pout								
IVa	I	42	4.260					
	III	54	6.033					
IVb	I	19	847					
	III	18	990					

Species Area	Season	Research Vessel Samples				Market Samples		
		No. of Samples	No. of Fish			No. of Samples	No. Of Fish	
			Measured	Aged	Racial Investig-ationn		Measured	Aged
Grenadier								
Macrourus berglax								
XIV	IV	34	566	566				
Coryphae-noides rupestris								
XIV	IV	2	58	58				
Greenland Halibut								
V+XIV	III	16	214	214		9	804	

Iceland

(S.A. Schopka)

The research work carried out on demersal fish was to a great extent following the same lines as in previous years i.e. based on market samples and research vessel data.

The groundfish survey which has been carried out by research vessels was reorganized and extended from 200 to 600 stations. This survey was made in three weeks simultaniously on board of five Japanese build stern trawlers of same type.

In August the research vessel „Dröfn" was engaged in fishing experiments on demersal fish in the Skjoldenfjorden area at East Greenland. During this survey some cod were tagged.

Fishery inspectors collected considerable amount of data on demersal fish, especially cod on board of commercial vessels.

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

Sampling data for cod 1985

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	aged	tagged
Va	Jan.-March	1112		132256	7603	
-	-		70	10991	2524	
-	Apr.-June	182		39262	1381	
-	-		62	18481	1783	
-	July-Sept	189		29829	1667	
-	-	-	10	658	480	
-	Oct.-Dec.	114		17089	1180	
-	-		24	1964	1313	
		1597	166	250530	17931	
XIV	July-Sept.	5		-	99	63

Sampling data for saithe 1985

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	aged	tagged
Va	Jan.-March	377		2481	1269	
-	-		12	1342	605	
-	Apr.-June	14		2154	200	
-	-		13	1683	472	
-	July-Sept.	12		752	277	
-	-		-	-	-	
-	Oct.-Dec.	3		12	-	
-	-		5	554	295	
		406	30	8978	3118	

Sampling data for haddock 1985

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	aged	tagged
Va	Jan.-March	630		41957	2299	
-	-		20	2224	942	
-	Apr.-June	28		3403	298	
-	-		16	1841	700	
-	July-Sept.	20		696	-	
-	-		2	197	100	
-	Oct.-Dec.	38		1356	-	
-	-		12	1173	600	
		716	50	52847	4939	

Whiting 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-Mar.	75		1433	5
	Apr.-Jun.				
	Jul.-Sep.	2		44	
	Oct.-Dec.	5		25	
		82		1502	5

Roundnose grenadier 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.Mar.	30		3344	595
	Apr.-Jun.				
	Jul.-Sep.	13		2828	365
	Oct.-Dec.	3		47	
		46		6219	960

Roughhead grenadier 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-Mar.	7		232	
	Apr.-Jun.				
	Jul.-Sep.				
	Oct.-Dec.	9		26	
		16		258	

Sampling data for redfish 1985

S. marinus

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan-March	562		63828	2	
-	-		9	1502	423	
-	Apr.-June		14	2719	394	
-	July-Sept.	30		2691		
-	-		12	3402	331	
-	Okt.-Dec.	20		1517		
-	-		9	2521	254	
Sub. Total		612	44	78180	1404	

S. mentella

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-March	80		4510	100	
-	-		5	1038	167	
-	Apr.-June		7	1568	272	
-	July-Sept.	10		1321		
-	-		2	490	155	
-	Okt.-Dec.	4		719		
-	-		4	316	280	
Sub. Total		94	18	9962	974	

S. viviparus

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-March	221		8362		
-	Jul.-Sept.	8		492		
-	Okt.-Dec.	11		1567		
-	-		1	13		
Sub. Total		240	1	10434		
Grand Total		946	63	98576	2378	

Sampling data for Catfish (Anarhichas lupus) 1985

Area	Season	No of samples		No of fish		
		Research vessels	Market samples	Measured	Aged	Tagged
Va	Jan.-March	481	-	18.946	1.867	-
	-	-	-	-	-	-
	Apr.-June	10	-	-	-	377
	-	-	1	-	180	-
	July-Sept	-	-	-	-	-
	-	-	1	167	-	-
	Oct.-Dec.	26	-	160	-	-
	-	-	-	-	-	-
		517	2	19.273	2.047	377

Blue ling 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-March	80		1350	655
	Apr.-June				
	Jul.-Sept.	16		144	
	-		1	100	100
	Oct.-Dec.	10		418	168
		106	1	2012	923

Silver smelt 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-Mar.	89		4.538	592
	-				
	Apr.-Jun.				
	Jul.-Sept.	7		839	235
	Oct.-Dec.	10		955	418
		106		6.332	1.245

Tusk 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-mar.	316		1575	957
			3	556	200
	Apr.-Jun.				
	Jul.-Sept.	14		31	
	Oct.-Dec	12		38	
			1	16	
		342	4	2200	1173

Ling 1985

Area	Season	No of fish		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan.-Mar.	129		368	238
	Apr.-Jun.				
	Jul.-Sep.	1		3	
	Oct.-Dec.	3		4	
		133		375	238

Sampling data for Greenland halibut
(Reinhardtius hippoglossoides) 1985

Area	Season	No of samples		No of Fish	
		Res. vess.	Market S.	Measured	Aged
Va	Jan.-March	-	16	1.178	799
Va	"	14	-	2.418	674
Va	Apr.-June	-	30	2.638	1.100
-	"	-	-	-	-
Va	July-Sept.	-	5	917	200
XIV	"	3	-	-	139
Va	Okt.-Des.	-	4	370	200
-	"	-	-	-	-
Total		17	55	7.521	3.112

Sampling data for Halibut (Hippoglossus hippoglossus) 1985

Area	Season	No of samples		No of fish	
		Research vessels	Market samples	Measured	Aged
Va	Jan-March	256	-	2.190	471
	"	-	-	-	-
	Apr.-June	1	-	-	25
	"	-	1	190	-
	July-Sept.	-	-	-	-
	"	-	1	-	100
	Okt.-Dec.	-	-	-	-
	"	-	-	-	-
		257	2	2.380	596

Sampling data for plaice 1986
(Pleuronectes platessa)

Area	Season	No of samples		No of fish		
		Res.vess.	Market s.	Measured	Aged	Tagged
Va	Jan.-Mar.		8	861	216	
		654		5.166	602	
Va	Apr.-Jun.	15		109		3.690
			2	128	128	
Va	Jul.-Sep.		17	3.022	544	
Va	Okt.-Dec.		6	1.433	509	
Total		669	33	10.719	1.999	3.690

IRELAND

(R. Grainger)

Port sampling continued for commercial catches of cod, whiting and haddock in Divisions VIa and VIIb, cod and haddock in Division VIb and cod, whiting and plaice in Division VIIa. Whiting discards from Div. VIIa Nephrops fishery were also sampled.

A beam trawl survey for juvenile plaice in shallow water off the east coast of Ireland was carried out in May and September.

Groundfish surveys in the Irish Sea aimed at assessing pre-recruit whiting and cod were started in 1984 and were carried out in the northwest Irish Sea in June and September.

Species	Division	Quarter	No. of samples	No. of fish	
				measured	aged
Cod	VIa	1	12	896	415
		2	11	343	164
		3	9	538	258
		4	12	773	327
	VIIa	1	19	1145	462
		2	13	1351	458
		3	11	1565	394
		4	13	1155	232
	VIIb	1-4	16	794	516
totals			116	8560	3226

Species	Division	Quarter	No. of samples	No. of fish measured	No. of fish aged
Haddock	VIa	1	10	672	233
		2	11	1804	295
		3	12	1733	326
		4	8	1151	300
	VIb	2	1	265	95
	VIIb	1-4	10	734	380
Totals			52	6359	1629

Species	Divisions	Quarter	No. of samples	No. of fish measured	No. of fish aged
Whiting	VIa	1	11	1914	203
		2	5	1276	266
		3	4	1238	130
		4	4	871	131
	VIIa	1	7	1443	125
		2	7	1181	210
		3	17	2970	264
		4	10	2368	238
	VIIb	1-4	11	2914	421
Whiting discards	VIIa	1	2	402	115
		2	2	146	0
		3	8	636	0
		4	16	521	98
Totals			104	17880	2201

Species	Division	Quarter	No.of samples	No. of fish measured	No. of fish aged
Plaice	VIIa	1	7	861	136
		2	5	947	206
		3	27	4150	202
		4	16	2076	207
Totals			55	8034	751

	June		September	
Grundfish Surveys	No. caught	No. aged	No. caught	No. aged
Whiting	11932	84	66211	196
Cod	202	90	415	63
Plaice	1707	196	3921	211
No. of Station	26		26	

Beam Trawl Survey for Plaice

	May	September	
No. of hauls	41		41
Age group	1	0	1
Nos. caught	705	704	219

NETHERLANDS

(F.A. van Beek)

In 1985 the market sampling of the Dutch landings was continued for the following species: brill, cod, haddock, plaice, sole, turbot and whiting. For roundfish, brill and turbot the market sampling was stratified on an area basis (figure 2 in Administrative Report of 1982). For the other flatfish species the stratification was based on the landings per fishing harbour.

In February R.V. "Tridens" and R.V. "Isis" participated in the International Young Fish Surveys (IYFS). These surveys are carried out yearly since 1960 and estimate the relative abundance of 1 and 2 year old herring and roundfish.

In January/February R.V. "Tridens" and R.V. "Isis" carried out a beam trawl survey on the spawning grounds of plaice in order to investigate the stage of maturity in relation to the distribution, age and length of the fish.

In the period February/May 5 larval surveys were carried out with a "anchored net" in the Waddensea by R.V. "Stern". These surveys measure the number of herring- and plaice larvea in the Waddensea.

In April/May and September/October Demersal Young Fish Surveys (DYFS) were carried out with a beam trawl and a shrimp trawl in the continental nurseries by R.V. "Tridens", R.V. "Stern", R.V. "Schollevaar" and R.V. "Isis" in collaboration with Belgium and the Federal Republic of Germany. These surveys are directed on brouwn shrimps and 0-, 1- and 2-group prerecruits of plaice and sole.

In the period April/June 3 additional sole egg surveys were carried out by R.V. "Isis" in the Southern North Sea in order to cover the missing areas of the International 1984 Sole Egg Surveys.

In May R.V. "Tridens" carried out a survey in the Central and Southern North Sea directed on 0-group cod. In this survey also the standard pelagic 0-group trawl was compared with a GOV trawl with a narrow meshed cod end.

In June R.V. "Isis" carried out 2 tagging surveys on plaice in the Southern North Sea. Plaice of different length groups were tagged with a chemical tag (tetracycline) and a "traditional" Peterson tag.

In August a beam trawl survey was carried out in the Central and Southern North Sea by R.V. "Isis" and the charter "KW 34" in order to investigate the distribution and abundance of plaice and sole in these areas.

In October/November R.V. "Tridens" and R.V. "Isis" carried out a survey in the southern Norht Sea with the GOV trawl directed to roundfish. This survey is held since 1980 (Dutch Groundfish Survey)

SAMPLING DATA FOR Brill 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
North Sea	1st quarter	1089	340	61
	2nd quarter	1220	590	14
	3rd quarter	904	202	28
	4th quarter	347	360	15

SAMPLING DATA FOR turbot 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
North Sea	1st quarter	1417	315	46
	2nd quarter	1705	611	36
	3rd quarter	1515	257	132
	4th quarter	552	316	79
Wadden Sea Estuary	1st quarter			
	2nd quarter			1
	3rd quarter			
	4th quarter			

SAMPLING DATA FOR dab 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
North Sea	1st quarter			
	2nd quarter			1053
	3rd quarter			611
	4th quarter			1078
Wadden Sea Estuary	1st quarter			
	2nd quarter			64
	3rd quarter			
	4th quarter			110
Zeeland Estuary	1st quarter			
	2nd quarter			25
	3rd quarter			
	4th quarter			

SAMPLING DATA FOR plaice 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
North Sea	1st quarter		2865	3214
	2nd quarter		1034	1825
	3rd quarter		1439	1347
	4th quarter		1185	1835
Wadden Sea Estuary	1st quarter			
	2nd quarter			318
	3rd quarter			
	4th quarter			394
Zeeland Estuary	1st quarter			
	2nd quarter			92
	3rd quarter			
	4th quarter			111

SAMPLING DATA FOR sole 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
North Sea	1st quarter		1167	
	2nd quarter		1999	392
	3rd quarter		985	330
	4th quarter		956	484
Wadden Sea Estuary	1st quarter			
	2nd quarter			102
	3rd quarter			
	4th quarter			13
Zeeland Estuary	1st quarter			
	2nd quarter			66
	3rd quarter			
	4th quarter			50

SAMPLING DATA FOR cod 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
1 Northern North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter			210
2 Central North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter	 586 100	 159	45 65
3 North Western North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter			38
4 Western North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter	466 295 205 50	100 50 7	 113
5 South Western North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter	355 605 1093 33	50 150 194	8 2
6 Southern North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter	2186 1346 635 483	300 100 100 90	176 143 419
7 Eastern North Sea	1st quarter 2nd quarter 3rd quarter 4th quarter	 56	 50	 71

SAMPLING DATA FOR haddock 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
1 Northern North Sea	1st quarter			185
	2nd quarter			
	3rd quarter			
	4th quarter			
2 Central North Sea	1st quarter			108
	2nd quarter	351		
	3rd quarter	76		
	4th quarter			
3 North Western North Sea	1st quarter			128
	2nd quarter			
	3rd quarter			
	4th quarter			
4 Western North Sea	1st quarter	273		
	2nd quarter	354	100	
	3rd quarter	66		25
	4th quarter			
5 South Western North Sea	1st quarter			9
	2nd quarter	76	25	
	3rd quarter	296	100	
	4th quarter			
6 Southern North Sea	1st quarter	488	100	83
	2nd quarter	367	75	
	3rd quarter	458	75	86
	4th quarter	219	25	126
7 Eastern North Sea	1st quarter			
	2nd quarter			
	3rd quarter			
	4th quarter			

SAMPLING DATA FOR whiting 1985

AREA	PERIOD	number of fish sampled		
		fish market		research vessel
		measured	aged	aged
1 Northern North Sea	1st quarter			130
	2nd quarter			
	3rd quarter			
	4th quarter			
2 Central North Sea	1st quarter			15
	2nd quarter	250	44	
	3rd quarter			37
	4th quarter			
3 North Western North Sea	1st quarter			80
	2nd quarter			
	3rd quarter			10
	4th quarter			
4 Western North Sea	1st quarter	141		
	2nd quarter	316	50	
	3rd quarter	77		68
	4th quarter	42		
5 South Western North Sea	1st quarter	145	50	72
	2nd quarter	723	100	
	3rd quarter	1096	50	50
	4th quarter	93		
6 Southern North Sea	1st quarter	1885	150	114
	2nd quarter	1336	100	
	3rd quarter	1098	150	110
	4th quarter	862	150	359
7 Eastern North Sea	1st quarter			
	2nd quarter			
	3rd quarter	41		75
	4th quarter			

NORWAY

(O. M. Smedstad)

Subareas I and II

The research activities at sea continued at the same level as in 1984. The distribution of young cod and haddock were investigated during a combined acoustic and stratified bottom trawl survey in the Barents Sea in Februar-March. In May the distribution of young cod and haddock was studied in the central Barents Sea. Similar investigations were carried out in July-August in the Spitsbergen area. In September-October the distribution and abundance of cod, haddock, redfish, Greenland halibut and Blue whiting were investigated in the Bear Island-West Spitsbergen area.

Investigations on distribution and drift of cod eggs were carried out in March-April, and investigations on larvae and post-larvae were carried out in May-July. In August-September the annual international 0-group fish survey was carried out in the Barents Sea and adjacent areas. The distribution of spawning cod was studied in Lofoten and off Møre in Februar-March. Mature cod were tagged in the main spawning localities in Lofoten.

During May the distribution of 0-group saithe were investigated in the area Stad-Røst, while the distribution and abundance of older saithe were investigated in the area Røst-Troms in October-November.

The distribution of silver smelt was studied along the Norwegian coast during a survey in April. The sampling of commercial catches of cod, haddock and saithe were continued at the same level as last year.

Subarea IV

The sampling of commercial landings from two fisheries were continued and sampling of commercial saithe catches were improved. The distribution and abundance of I- und II-group gadoids were studied in February as part of the international young fish surveys. The distribution and abundance of 0-group gadoids were studied in July in the northern North Sea. In February and July the distribution and abundance of saithe were investigated in the northern North Sea.

COD

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1	47	1651	302	25757	11	1947	32	4005
	2	6	381	76	5764	17	2159	248	17870
	3			162	5575	15	2780	71	7499
	4	1	100			9	1434	2	250
II A	1	28	1572	144	15875	92	26311	42	31192
	2	4	162	26	4162	22	5144	32	6045
	3	2	99	65	2607	12	1310		
	4	2	22	22	449	23	3556	1	57
II B	1	1	44	3	190			2	181
	2	1	34	107	7937	1	81	16	815
	3	49	1864	479	19601			5	66
	4			18	830	11	1363	138	13425
IV A	1	15	348	11	104				
	2			11	164				
	3			10	213				
	4								
IV B	1	13	99	8	87				
	2								
	3								
	4								
V B	1								
	2								
	3								
	4								

	Tagged Fish
II A 1	1900
2	1299
II B 3	1221

HADDOCK

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1	42	1443	303	3331	1	72	34	5600
	2	3	59	62	4024	5	405	202	8993
	3			108	3277	13	1241	57	4504
	4					11	863	1	180
II A	1	20	853	151	23434	12	2142		
	2	5	237	27	1509	1	138	15	1322
	3			59	819	8	649		
	4	7	297	23	2039	8	894		
II B	1	1	36	3	130			1	77
	2			86	2935			12	333
	3	11	227	306	8404				
	4			5	51			99	2983
IV A	1	5	355	33	2756				
	2			12	1165				
	3			37	1986				
	4								
IV B	1	7	284	14	598	1	82		
	2								
	3								
	4								
V B	1								
	2								
	3								
	4								

SAITHE

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1	2	116	132	2239	1	177		
	2			1	1	3	385	1	1
	3			16	25	8	935	2	482
	4					1	207		
II A	1	15	607	64	1721	10	2563	14	4362
	2	1	41	115	4492	12	1747	3	561
	3			4	5	16	2012		
	4	4	121	13	330	13	1472	11	3823
II B	1								
	2			19	718				
	3	4	152	35	1201				
	4							27	1457
IV A	1	13	414	14	798	9	1032	16	2433
	2			6	161	7	346	30	4345
	3	10	623	19	976	9	900		
	4					5	237	26	2724
IV B	1			1	1				
	2								
	3					1	100		
	4								
V B	1								
	2								
	3								
	4								

GREENLAND HALIBUT

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			86	407				
	2			40	515	1	261	1	626
	3			8	44	1	251		
	4								
II A	1			19	66				
	2			10	156				
	3			16	415				
	4			3	89				
II B	1			3	24				
	2			21	679				
	3	3	125	195	6216	4	176		
	4			1	1				

TUSK

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			6	14			1	2
	2								
	3								
	4								
II A	1			45	220				
	2			1	1				
	3			4	8				
	4			18	106				
II B	1								
	2								
	3			6	12				
	4								
IV A	1			1	1				
	2								
	3			5	8				
	4								

WHITING

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			1	2				
	2								
	3								
	4								
II A	1			5	23				
	2								
	3			3	5				
	4								
II B	1								
	2								
	3								
	4								
IV A	1	4	272	21	656				
	2			10	381				
	3			29	1227				
	4								
IV B	1	10	278	23	1126				

NORWAY POUT

SPECIES AREA	SEASON	RESLARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			66	2647				
	2			3	62				
	3								
	4								
II A	1			57	4286				
	2			9	439				
	3								
	4			19	1117				
II B	1								
	2								
	3			6	50				
	4								
IV A	1	3	68	28	2095	2	132	4	392
	2					2	61	4	298
	3			17	825	3	71	6	332
	4								
IV B	1	1	56	2	32				

BLUE WHITING

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			71	2758				
	2			8	277				
	3								
	4								
II A	1			59	3186				
	2			4	184				
	3			11	176				
	4			18	462				
II B	1			1	2				
	2								
	3			62	1910				
	4			1	7				
IV A	1			4	296				
	2								
	3			1	145				
	4								

LONG ROUGH DAB

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			184	12518				
	2			50	2392				
	3			51	353				
	4								
II A	1			88	4412				
	2			18	847				
	3			20	642				
	4			22	722				
II B	1			3	213				
	2			19	663				
	3			253	13368				
	4			3	164				
IV A	1			49	442				
	2			7	28				
	3			13	431				
	4								
IV B	1			18	166				
	2								
	3								
	4								

LING

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		AGED		Measured		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
I	1			1	1				
	2								
	3								
	4								
II A	1			14	18				
	2								
	3								
	4			3	9				
II B	1								
	2								
	3								
	4								
IV A	1			3	20				
	2								
	3			12	33				
	4								
IV B	1			1	1				
	2								
	3								
	4								

SILVER SMELT

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			3	6				
	2								
	3								
	4								
II A	1			31	289				
	2			1	2				
	3			1	3				
	4			14	383				
II B	1								
	2								
	3								
	4								
IV A	1			6	10				
	2								
	3			6	210				
	4								

SANDEEL

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1								
	2								
	3			9	149				
	4								
II A	1								
	2								
	3			2	4				
	4								
II B	1								
	2								
	3			5	5				
	4								
IV A	1								
	2	3	120	7	434				
	3								
	4								
IV B	1								
	2			2	11				
	3								
	4								

REDFISH

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1			226	18217			2	16
	2			55	3490				
	3			4	20				
	4								
II A	1			163	12648				
	2			44	1151				
	3			63	6089				
	4			20	1247				
II B	1			4	321				
	2			23	1102				
	3			316	20128				
	4			2	95				
IV A	1			3	5				
	2								
	3								
	4								

SHRIMPS

SPECIES AREA	SEASON	RESEARCH VESSEL				MARKET			
		Aged		Measured		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
I	1								
	2			51	16191				
	3			178	14183				
	4								
II A	1								
	2			78	3348				
	3								
	4								
II B	1			5	276				
	2			119	4518				
	3			558	27542				
	4								
IV A	1								
	2								
	3								
	4								
IV B	1								
	2								
	3								
	4								
V B	1								
	2								
	3								
	4								

POLAND

No report received.

PORTUGAL

(F. Cardador)

During 1985, the INIP (Instituto Nacional de Investigação das Pescas), has conducted two stratified groundfish surveys, on board of the Portuguese R/V "NORUEGA", in June and October/November, along the Portuguese Continental coast. The main objective of the first cruise was to estimate indices of abundance of the most commercial species, and the goal of the second one was to estimate indices of recruitment of hake and horse-mackerel.

Other types of Portuguese research cruises were carried in 1985, not directed to the goals mentioned above, but they had contributed to provide additional biological information, specially for hake.

The National Sampling Programme (PNAB), at the main fishing harbours on the Continental coast, was continued by INIP, concerning lenght frequency distribution of the landings, for the most important species.

The following tables present the sampling data collected for Hake (Merluccius merluccius), Black scabbard-fish (Aphanopus carbo), Trisopterus luscus, T. minutus, and some species of seabreams: Pagellus acarne, P. bogaraveo, Spondyliosoma cantharus, Boops boops and Sparus pagrus.

TABLE 1 - Merluccius merluccius

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged *	Number of fish: Racial** invest.
IXa	1 st	1	390	20515	21	
	2 nd	93	524	42763	1273	
	3 rd	60	432	23214	1236	
	4 th	124	238	22248	931	
	TOTAL 1985	278	1584	108740	3461	

* to be aged
** no racial studies in INIP

TABLE 2 - Aphanopus carbo

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged	Number of fish: Racial** invest.
IXa	1 st		6	388		
	2 nd		7	382		
	3 rd		7	462		
	4 th	36	3	797		
	TOTAL 1985	36	23	2029		

TABLE 3 - Trisopterus luscus

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged	Number of fish: Racial** invest.
IXa	1 st	-	221	17028		
	2 nd	16	230	16903		
	3 rd	-	219	17128		
	4 th	19	197	17685		
	TOTAL 1985	35	867	68744		

** no racial studies in INIP

TABLE 4 - Trisopterus minutus

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged	Number of fish: Racial** invest.
IXa	1 st	-	-	-		
	2 nd	9	-	236		
	3 rd	-	-	-		
	4 th	9	-	876		
	TOTAL 1985	18	-	1112		

** no racial studies in INIP

TABLE 5 - Pagellus acarne

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged *	Number of fish: Racial** invest.
IXa	1 st	-	56	2788	131	
	2 nd	27	68	7566	67	
	3 rd	-	68	3707	87	
	4 th	14	68	4600	130	
	TOTAL 1985	41	260	18661	415	

* including otoliths and scales collected, not read
** no racial studies in INIP

TABLE 6 - Pagellus bogaraveo

Area	Season (quarter)	Number of samples: Research vessels	Number of samples: Market samples	Number of fish: Measured	Number of fish: Aged	Number of fish: Racial** invest.
IXa	1 st	-	12	208		
	2 nd	13	19	767		
	3 rd	-	16	426		
	4 th	-	12	332		
	TOTAL 1985	13	59	1733		

** no racial studies in INIP

TABLE 7 - Spondyliosoma cantharus

Area	Season (quarter)	Number of samples		Number of fish		
		Research vessels	Market samples	Measured	Aged	Racial** invest.
IXa	1 st	-	27	832		
	2 nd	21	40	1453		
	3 rd	-	35	1042		
	4 th	7	31	747		
	TOTAL 1985	28	133	4074		

** no racial studies in INIP

TABLE 8 - Boops boops

Area	Season (quarter)	Number of samples		Number of fish		
		Research vessels	Market samples	Measured	Aged	Racial** invest.
IXa	1 st	-	63	3948		
	2 nd	31	64	4452		
	3 rd	-	68	3700		
	4 th	12	70	4742		
	TOTAL 1985	43	265	16842		

** no racial studies in INIP

TABLE 9 - Sparus pagrus

Area	Season (quarter)	Number of samples		Number of fish		
		Research vessels	Market samples	Measured	Aged	Racial** invest.
IXa	1 st	-	26	252		
	2 nd	6	26	212		
	3 rd	-	23	230		
	4 th	-	20	185		
	TOTA 1985	6	95	879		

** no racial studies in INIP

SPAIN

(F.J. Pereiro)

SAMPLING DATA FOR HAKE 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1		2	268		
	2		1	62		
	3		4	396		
	4		5	581		
VII	1		8	2 760		
	2		13	2 928		
	3		19	4 267		
	4		26	5 729		
VIIIab	1		42	6 188		
	2		51	8 312		
	3		43	9 069		
	4		37	6 817		
VIIIc	1		23	2 641		
	2		50	4 453		
	3	70	44	11 753	169	
	4		32	4 529		
IXa	1		22	3 373	222	
	2		21	2 949	157	
	3	29	19	9 430	751	
	4		28	2 934	644	

SAMPLING DATA FOR MONK L. BUDEGASSA 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1					
	2					
	3					
	4					
VII	1		6	736		
	2		6	744		
	3		25	2 368		
	4		21	1 880		
VIIIab	1		18	697		
	2		30	717		
	3		23	624		
	4		23	1 202		
VIIIc	1		11	267		
	2		16	280		
	3	79	25	352		
	4		26	442		
IXa	1		1	50		
	2		-	-		
	3		-	-		
	4		9	107		

SAMPLING DATA FOR MONK L. PISCATORIUS 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1					
	2					
	3					
	4					
VII	1		6	374		
	2		6	364		
	3		25	2 159		
	4		21	2 043		
VIIIab	1		21	1 522		
	2		30	1 249		
	3		26	1 403		
	4		23	2 021		
VIIIc	1		15	568		
	2		20	852		
	3	79	34	1 372		
	4		36	1 266		
IXa	1		1	19		
	2		-	-		
	3		-	-		
	4		9	85		

SAMPLING DATA FOR MEGRIM L. BOSCII 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1		1	1		
	2		-	-		
	3		1	2		
	4		1	3		
VII	1		11	183	25	
	2		9	58	1	
	3		20	1 186	8	
	4		18	1 142	39	
VIIIab	1		14	62		
	2		13	64		
	3		14	289		
	4		18	358		
VIIIc	1		6	170		
	2		6	414		
	3	7º	11	1 251	278	
	4		11	885		
IXa	1		4	322		
	2		5	447		
	3	29	6	831	356	
	4		11	834		

SAMPLING DATA FOR MEGRIM L. WIFFIAGONIS 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1		1	45		
	2		-	-		
	3		5	680		
	4		6	322		
VII	1		11	3 622	235	
	2		9	2 793	221	
	3		22	4 388	172	
	4		22	4 413	217	
VIIIab	1		21	1 022		
	2		21	1 096		
	3		21	1 155		
	4		21	1 274		
VIIIc	1		9	1 083		
	2		7	658		
	3	79	14	1 772	365	
	4		12	921		
IXa	1		4	7		
	2		5	15		
	3		6	8	1	
	4		11	123		

SAMPLING DATA FOR SEABREAM P. BOGARAVEO 1985

AREA	SEASON	Nº OF SAMPLES		Nº OF FISH		
		RESEARCH VESSEL	MARKET SAMPLES	MEASURED	AGED	RACIAL INV.
VI	1					
	2					
	3					
	4					
VII	1					
	2					
	3		1	19		
	4		1	15		
VIIIab	1		8	153		
	2		10	91		
	3		1	6		
	4		1	7		
VIIIc	1		33	3 296		
	2		32	2 405		
	3	79	14	805		
	4		12	760		
IXa	1					
	2					
	3					
	4					

SWEDEN

(B. Sjöstrand)

Sweden took part in the International Young Herring Survey in the North Sea and the Skagerrak. However, it has no other activities on which to report owing to reduced opportunities.

UNITED KINGDOM (England and Wales

(C.T. Macer)

England and Wales demersal fish sampling 1985

Species	Area	Research Vessels			Market			
			No of fish			No of fish		
		Samples	Measured	Oto'd	Samples	Measured	Oto'd	
Bass	104C	+	+	40	5	220	220	
	107A	-	-	-	4	163	163	
	107D	-	-	-	20	1 572	519	Scales
	107E	-	-	-	8	303	218	
	107F&G	-	-	-	3	147	147	
Cod	104A	+	+	204	46	7 606	625	
	104B	+	+	805	618	100 569	6 335	
	104C	+	+	116	71	10 952	979	
	106A	-	-	-	12	2 059	269	
	106B	-	-	-	11	887	193	
	107A	+	+	237	99	14 122	1 914	
	107D	-	-	-	26	677	29	
	107E	+	+	3	-	-	-	
	107F&G	+	+	98	6	675	94	
	107H	+	+	7	-	-	-	
	107J	+	+	25	-	-	-	
Dogfish (spurdogs)	104A	+	+	27**	14	1 303	19**	
	104B	+	+	10**	79	5 365	20**	
	104C	-	-	-	38	2 971	-	Spines.
	106A) 107A)	-	-	-	44	4 685	21**	
	108	+	+	40	-	-	-	
Haddock	104A	+	+	425	34	6 631	398	
	104B	+	+	1 049	296	45 863	2 930	
	104C	+	+	24	5	528	19	
	106A	-	-	-	18	3 285	429	
	106B	-	-	-	33	5 298	442	
	107A	-	-	-	2	219	54	
Hake	106A	-	-	-	1	63	-	
	107A	+	+	67	21	3 669	-	
	107E	+	+	38	)			
	107F&G	+	+	178	)			
	107H	+	+	59	) 37	2 436	-	
	107J	+	+	213	)			
	108	+	+	182				
Lemon sole	107A	+	+	98	-	-	-	
	107D	-	-	-	1	138	-	
	107E	+	+	10	78	10 593	284	
	107F+G	+	+	87	-	-	-	
	107H	+	+	23	-	-	-	
	107J	+	+	37	-	-	-	
	108	+	+	7	-	-	-	
Megrim	107A	+	+	1	-	-	-	
	107E	-	-	-	)			
	107F&G	+	+	155	)			
	107H	+	+	294	) 23	2 935	231	
	107J	+	+	689	)			
	108	+	+	326				

England and Wales demersal fish sampling 1985

Species	Area	Research Vessels			Market		
			No of fish			No of fish	
		Samples	Measured	Oto'd	Samples	Measured	Oto'd
Monk or Anglers	107A	+	+	41	-	-	-
	107D	-	-	-	1	129	-
	107E	+	+	5	)		
	107F&G	+	+	42	)		
	107H	+	+	35	) 72	9 249	-
	107J	+	+	173	)		
	108	+	+	84	-	-	-
Plaice	104A	+	+	122	18	4 674	371
	104B	+	+	279	136	29 472	3 056
	104C	+	+	54	1	197	25
	107A	+	+	1 528	72	13 975	1 864
	107D	-	-	-	42	2 235	394
	107E	+	+	40	91	10 475	956
	107F&G	+	+	46	17	2 704	322
	107H	-	-	-	-	-	35
	107J	+	+	12	-	-	-
Saithe	104A	+	+	164	11	1 447	203
	104B	+	+	21	2	163	53
	106A	-	-	-	3	287	47
	107A	-	-	-	1	70	13
Sole	104A	-	-	-	-	-	5
	104B	+	+	1	66	8 952	811
	104C	-	-	-	60	8 994	712
	107A	+	+	330	52	8 092	484
	107D	-	-	-	47	2 489	258
	107E	+	+	88	88	13 642	483
	107F&G	+	+	9	28	4 790	246
	108	+	+	4	-	-	-
Whiting	104A	+	+	352	17	1 733	256
	104B	+	+	1 132	238	20 141	2 150
	104C	+	+	309	5	295	-
	107A	+	+	828	98	11 137	1 062
	107D	-	-	-	5	176	182
	107E	+	+	78	78	9 986	414
	107F+G	+	+	147	12	1 500	100
	107H	+	+	21	1	178	-
	107J	+	+	24	-	-	-
	108	+	+	7	-	-	-
Skates & Rays	104A	+	+	-	-	-	-
	104B	+	+	-	-	-	-
	104C	+	+	-	-	-	-
	107A	+	+	-	42	5 852	-
	107E	+	+	-	-	-	-
	107F&G	+	+	-	-	-	-
	107H	+	+	-	-	-	-
	107J	+	+	-	-	-	-
	108	+	+	-	-	-	-

England and Wales demersal fish sampling 1985.
Samples taken on Research Vessels only.

Species	Area	Samples	No of fish	
			Measured	Oto'd
Blue whiting	104A	+	+	-
	107E	+	+	13
	107F&G	+	+	111
	107H	+	+	23
	107J	+	+	54
	108	+	+	117
Ling	104A	+	+	17
	104B	+	+	8
	107A	+	+	10
	107E	+	+	4
	107F&G	+	+	23
	107H	+	+	18
	107J	+	+	5
	108	+	+	20
Norway Pout	104A	+	+	141
	104B	+	+	241
Pollack	104A	+	+	1
	104B	+	+	29
	107A	+	+	5
	107F+G	+	+	58
	107J	+	+	2
	108	+	+	2

UK (Scotland)

(R. Jones)

(1) Sampling Demersal Fish

In 1985 the numer of gears sampled on a regular basis at S Scottish fish markets was increased to five (motor trawl, demersal seine, light trawl, Nephrops trawl and pair trawl) to take account of the development of pair trawling as a significant component of the Scottish demersal fleet.

Demersal fish were sampled at all the major fishing ports in Scotland. The intensity of sampling of the major demersal species is indicated in the text table below.

Species	No. of vessels sampled	No. of fish measured	No. of otoliths collected
Cod	613	80261	23055
Haddock	602	173986	23658
Whiting	575	118325	16995
Saithe	288	18715	6189

Sampling of demersal fish discarded by the Scottish fleet was also carried out on a regular basis in 1985. Samples were obtained during the course of 67 commercial trips from 914 hauls. The intensity of sampling is indicated in the text table below.

Species	No. of vessels sampled	No. of fish measured	No. of otoliths collected
Cod	67	10109	1941
Haddock	67	82469	6016
Whiting	67	31718	4626
Others	67	79813	Nil

(2) Research Vessel Activities

In January 1985 "Scotia" carried out a survey of demersal fish and herring stocks off the west coast of Scotland (ICES Sub-area VIa).

In February 1985 "Scotia" participated in the International Young Fish Survey in the North Sea.

In August 1985 "Scotia" carried out a survey of demersal fish stocks in the northern and middle North Sea (ICES Sub-areas IVa and IVb).

In June 1985 "Clupea" carried out a pelagic 0-group survey for gadoid species. (This survey is a partial continuation of the International 0-group Gadoid Survey which was discontinued in 1983.)

In September 1985 a commercial vessel, the "Clarkwood", was chartered to carry out a survey of the haddock stock on Rockall Bank.

(3) Tagging of Demersal Fish

It was decided in 1980 that Scotland would carry out no further tagging of demersal fish until all of the data from previous tagging experiments had been collated, included in an appropriate computer data base and had been examined at least on a preliminary basis.

The computer data base for cod, haddock, whiting and saithe was completed in 1983 and preliminary analysis of the results had been completed for saithe and is in progress for whiting.

U.S. ADMINISTRATIVE REPORT TO DEMERSAL FISH COMMITTEE

(M. P. Sissenwine)

The U.S. did not fish in the Northeast Atlantic region during 1985 so it has no biological samples to report. Although it didn't physically conduct research in ICES zone, the U.S. continued to contribute to Statutory Meetings and Working Groups. The U.S. has an extensive research program on demersal fish of the Northwest Atlantic. Because of the similarities in fisheries and fish communities between the east and west sides of the North Atlantic, U.S. research program is relevant to ICES.

The U.S. demersal fish research in the Northwest Atlantic continued along the same lines as in previous years. The research is multifaceted including (1) collection of harvesting statistics, (2) collection of biological samples, (3) standardized bottom trawl surveys, (4) standardized ichthyplankton surveys, (5) special studies (field and laboratory) on recruitment processes, (6) studies of the effects of anthropogenic agents, and (7) analyses.

Important advances are being made in the scientific conduct and analysis of trawl surveys. These include gear intercalibrations studies, improved instrumentation to monitor gear performance, evaluation of survey design, and new methods of times series smoothing to take account of between survey variability in catchability coefficient. Ichthyoplankton survey data is also being subjected to more intense analysis than ever before to improve estimates of within survey variance, to evaluate the propagation of error in methods of back calculation of spawning biomass, and to derive an alternative estimate of total finfish biomass.

Studies of recruitment processes focus on Georges Bank cod and haddock. The work completed to date indicates that predation and post-larval (small

juveniles) survival rate are more important components of the recruitment problem than believed previously. Recruitment studies are proceeding to test sampling gear needed to collect post-larval fish and their predators, and to define distributions in time and three dimensional space. Laboratory facilities are being modified to allow experimentation on post-larval fish. The U.S. has formulated a national multiagency recruitment initiative which falls under the umbrella of IREP.

A variety of important analyses are under way. These include (1) further development of multispecies (both technological and biological interactions) modeling techniques, (2) methods of analysis of survey data (as noted above), (3) analysis of food habits data, (4) energetic models of recruitment, and (5) development of new stock assessment methods. In addition U.S. scientists are reevaluating biological reference points for fisheries management consistent with recent deliberations of the ICES Ad Hoc Methods Working Group. Current stock assessments indicate that demersal fish abundance is severely depressed and that fishing mortality rate is too high relative to traditional and newly formulated biological reference points.

The U.S. is conducting a variety of studies of the effects of anthropogenic stress on demersal fish production. The emphasis is on flounders that inhabit coastal waters. These studies focus on reproductive effects of stress and the relationship between habitat quality and incidence of "serious" (i.e. effecting productivity of the population) diseases. A high incidence of malignant tumors has been found in livers of winter flounder (Pseudopleuronectes americanus) from some highly degraded areas.

A more complete report of U.S. research in the Northwest Atlantic is presented annually to NAFO.

USSR

(S.A. Studenetsky)

In 1985, as previously, investigations to assess young and adult commercial bottom fishes were carried out by the methods of the trawl-acoustic survey. The strength of cod, haddock, redfish, saithe and other fishes was estimated by eggs, larvae and fingerlings.

Continued were investigations to study ecological-physiological features in commercial fishes during the wintering and feeding. Some elements of the trawl-acoustic survey of bottom fishes were drilled. With the submersible equipment collected were materials to calculate the catchability coefficients of sampling trawls separately by species and sizes. Methods were worked out to calculate allowable by-catches of young cod, haddock and redfish when fishing for capelin and shrimp.

Continued was collecting of ichthyological data by size-age composition, feeding, maturity in cod, haddock, redfish, plaice, Greenland halibut, long rough dab, wolffishes in the ICES Subarea I and Divisions IIa and IIb.

Materials collected in 1985 onboard research, scounting and fishing vessels are set out in the table below.

ICES area	Quarter	No. of fish*		
		measured	examined for feeding	aged
1	2	3	4	5
		Cod		
Sub-area I	I	8532	2360	914
	II	78754	6578	1700

1	2	3	4	5
	III	30179	4164	1577
	IV	65329	2287	2112
Division IIb	I	4937	1087	447
	II	668	73	-
	III	9937	1797	871
	IV	24030	2565	1630
Division IIa	I	7148	2142	1119
	II	4458	435	125
	III	-	-	-
	IV	6624	1720	710
Total		240596	25208	11205
		Haddock		
Sub-area I	I	35092	2879	1401
	II	26154	2883	721
	III	14552	1571	919
	IV	63106	4316	2556
Division IIb	I	25	-	-
	II	1443	275	200
	III	445	50	-
	IV	11926	982	682
Division IIa	I	496	256	207
	II	16	16	-
	III	-	-	-
	IV	4588	782	410
Total		157843	14010	7096
		Redfish		
Sub-area I	I	4898	25	-
	II	3991	50	-
	III	673	55	-
	IV	4080	276	300
Division IIb	I	683	336	252
	II	4462	-	-
	III	964	140	-
	IV	8259	277	100
Division IIa	I	25872	3887	1702
	II	24832	3170	3400

1	2	3	4	5
	III	-	-	-
	IV	12187	935	500
Total		90901	9151	6254
		Greenland halibut		
Sub-area I	I	74	-	-
	II	-	-	-
	III	139	1	-
	IV	156	-	-
Division IIb	I	1646	388	754
	II	941	250	-
	III	2099	175	-
	IV	8119	1053	194
Division IIa	I	1173	175	-
	II	300	300	300
	III	-	-	-
	IV	3565	383	-
Total		18212	2724	1248
		Saithe		
Sub-area I	I	1054	50	-
	II	826	150	100
	III	30	1	-
	IV	953	50	-
Division IIb	I	-	-	-
	II	101	-	-
	III	-	-	-
	IV	3696	125	-
Division IIa	I	874	326	303
	II	235	80	-
	III	-	-	-
	IV	102	50	-
Total		7871	832	403

1	2	3	4	5
		Wolffishes		
Sub-area I	I	72	-	-
	II	-	-	-
	III	319	1	-
	IV	718	125	125
Division IIb	I	320	-	-
	II	-	-	-
	III	1188	-	-
	IV	1604	682	311
Division IIa	I	63	-	-
	II	9	9	-
	III	-	-	-
	IV	193	235	20
Total		4486	1052	456
		Plaice		
Sub-area I	I	2048	355	200
	II	-	-	-
	III	769	-	-
	IV	2511	424	500
Division IIb	I	-	-	-
	II	-	-	-
	III	-	-	-
	IV	-	-	-
Division IIa	I	-	-	-
	II	-	-	-
	III	-	-	-
	IV	-	-	-
Total		5328	779	700
		Long rough dab		
Sub-area I	I	3335	275	-
	II	-	-	-
	III	3134	200	200
	IV	8331	726	200

1	2	3	4	5
Division IIb	I	1678	185	60
	II	-	-	-
	III	-	-	-
	IV	8325	300	200
Division IIa	I	640	75	-
	II	50	50	-
	III	-	-	-
	IV	1925	-	-
Total		27418	1811	660
Sum total for all species		552655	55567	28022

* Fish samples were collected by research vessels only.